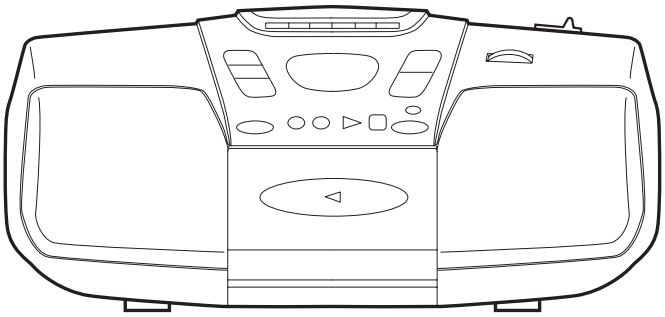
aiwa SERVICE

CSD-A240 LH



SERVICE MANUAL

COMPACT DISC STEREO
RADIO CASSETTE RECORDER

BASIC TAPE MECHANISM: ZZM-1 R5NC
BASIC CD MECHANISM: DA11T3C

aiwa

S/M Code No. 09-013-442-8N1

DATA

SPECIFICATIONS

<Tuner section>

Frequency range
FM:
87.5 MHz to 108.0 MHz
Antenna: Rod antenna
AM:
530 kHz to 1,710 kHz
Antenna: Ferrite bar antenna

<Deck section>

Track format 4 tracks, 2 channels
Frequency range Normal tape: 50 - 12,500 Hz (EIAJ)
Recording system AC bias
Erasing system Magnet erase
Heads Recording/playback head (1),
Erasure head (1)

<CD player section>

Disc Compact disc
Scanning method Non-contact optical scanner
(semiconductor laser)

<General>

Speaker 100 mm cone type (2)
Output Headphones jack (stereo mini-jack)
Power output 2.5 W + 2.5 W
(EIAJ 7 ohms, T.H.D. 10 % DC),
1.9 W + 1.9 W
(DIN 1% Rated Power)
Power requirements DC 12 V using eight size C (R14) batteries,
AC 110 - 120 V / 220 - 240 V switchable, 50/60 Hz
Power consumption 17 W
Dimensions (W x H x D) 414 x 183 x 235 mm
Weight 3.2 kg (excluding batteries)

• Design and specifications are subject to change without notice.

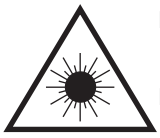
ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-CDA-902-010		IB,LH(ESP)FM
⚠ 2	87-A80-036-010		AC CORD SET ASSY,E W/FLTR V
⚠ 3	87-A91-017-010		PLUG,CONVERSION JT-0476

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

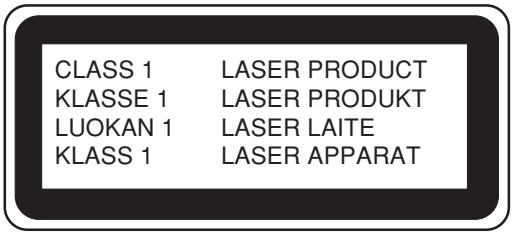
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

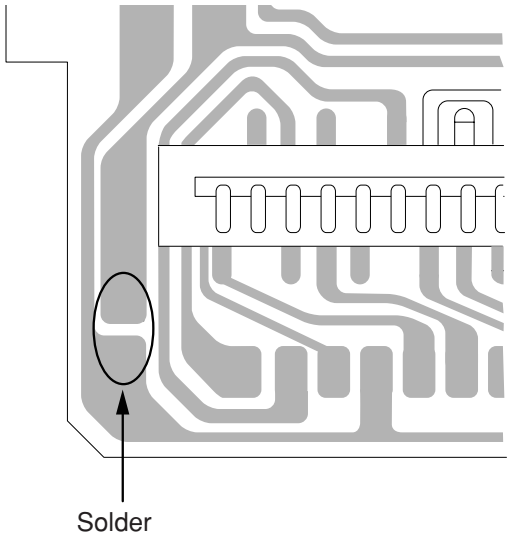


Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP Assy PWB



ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-955-010		IC,LA1828
	87-A21-193-010		IC,TA8227P
	87-A21-443-040		C-IC,M62495AFP
	87-A20-446-010		C-IC,LA9241ML
	87-A21-319-010		C-IC,LC78622NE
	87-A21-891-010		C-IC,MM1469XH
	8B-CDL-600-010		C-IC,LC865516A-5T66
	87-A21-607-010		IC,NJM14558LD
TRANSISTOR			
	89-327-143-080		C-TR,2SC2714O
	87-026-447-080		TR,2SC1740SR
	87-026-463-080		TR,2SA933SRS
	87-A30-288-040		C-TR,DTC114YKA
	89-318-154-080		TR,2SC1815Y
	89-112-965-080		TR,2SA1296GR
	87-026-291-080		TR,DTC124XS
	87-A30-476-010		TR,KTA1046Y
	87-026-462-080		TR,2SC1740SRS
	89-109-332-380		TR,2SA933RS
	87-A30-515-080		TR,2SA1979O/Y
	87-A30-287-040		C-TR,DTC114TKA
	87-A30-076-080		C-TR,2SC3052F
	87-A30-431-040		C-TR,DTC124TKA
	87-026-464-080		TR,DTC114TS
DIODE			
	87-A40-650-080		ZENER,MTZJ6.8A
	87-070-345-080		DIODE,IN4148
	87-A40-648-080		ZENER,MTZJ8.2A
	87-A40-234-080		ZENER,MTZJ5.6A
	87-017-978-080		DIODE,1N4003
	87-017-932-080		ZENER,MTZJ6.2B
	87-020-465-080		DIODE,1SS133
	87-A40-465-010		DIODE,FR202
MAIN C.B			
C211	87-A11-177-080		C-CAP,S 0.15-16 K B
C212	87-A11-177-080		C-CAP,S 0.15-16 K B
C215	87-016-460-080		C-CAP,S 0.22-16 B
C216	87-016-460-080		C-CAP,S 0.22-16 B
C231	87-010-213-080		C-CAP,S 0.015-50 B
C232	87-010-213-080		C-CAP,S 0.015-50 B
C233	87-A10-201-080		C-CAP,S0.33-16 KB
C234	87-A10-201-080		C-CAP,S0.33-16 KB
C235	87-016-669-080		C-CAP,S 0.1-25 K B
C236	87-016-669-080		C-CAP,S 0.1-25 K B
C237	87-010-371-080		CAP, ELECT 470-6.3V
C239	87-010-805-080		C-CAP,S 1-16 ZF
C240	87-010-805-080		C-CAP,S 1-16 ZF
C247	87-010-401-080		CAP, ELECT 1-50V
C248	87-010-401-080		CAP, ELECT 1-50V
C310	87-010-248-080		CAP, ELECT 220-10V
C316	87-010-263-080		CAP, ELECT 100-10V
C317	87-015-819-080		CAPACITOR,0.01
C801	87-010-248-080		CAP, ELECT 220-10V
C805	87-012-365-080		C-CAP,S 0.027-25VBK
C806	87-012-365-080		C-CAP,S 0.027-25VBK
C807	87-010-406-080		CAP, ELECT 22-50V
C808	87-010-406-080		CAP, ELECT 22-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-401-080		CAP, ELECT 1-50V
C811	87-010-178-080		CHIP CAP 1000P
C812	87-010-178-080		CHIP CAP 1000P
C816	87-010-180-080		C-CER 1500P
C817	87-010-180-080		C-CER 1500P
C821	87-010-401-080		CAP, ELECT 1-50V
C822	87-010-401-080		CAP, ELECT 1-50V
C823	87-010-178-080		CHIP CAP 1000P
C824	87-010-178-080		CHIP CAP 1000P
C829	87-010-178-080		CHIP CAP 1000P
C830	87-010-178-080		CHIP CAP 1000P
C834	87-010-248-080		CAP, ELECT 220-10V
C843	87-A11-132-080		CAP, TC U 0.01-50 KB
C844	87-018-124-080		CAP, CER 270P-50V
C845	87-010-178-080		CHIP CAP 1000P
C846	87-010-263-080		CAP, ELECT 100-10V
C851	87-A11-128-080		CAP,TC U 4700P-50
C852	87-018-131-080		CAP, TC U 1000P
C853	87-A11-132-080		CAP,TC U 0.01-50 K B
CN201	87-099-018-010		CONN,16P
CN801	87-A60-110-010		CONN,4P V S2M-4W
CNA302	8B-CDA-629-010		CONN ASSY,6P MA-TU
CNA801	8B-CDA-630-010		CONN ASSY,4P RPH
JW108	87-003-097-080		COIL,1.0UH K LAL02
JW132	87-003-097-080		COIL,1.0UH K LAL02
JW133	87-003-097-080		COIL,1.0UH K LAL02
L801	87-007-342-010		COIL,OSC 85K BIAS
SW801	8Z-CD9-609-010		SW,SL 1-6-2 PS62D01
FRONT C.B			
C601	87-018-150-080		CAP,TC-U 18P-50 CH
C602	87-018-111-080		CAP, CERA-SOL SS 27P
C603	87-018-116-080		CAP, CER 56P-50V
C604	87-018-149-080		CAP,TC-U 15P-50 CH
C605	87-018-114-080		CAP, CERA-SOL SS 39P
C606	87-010-197-010		CAP, S 0.01-25
C609	87-010-197-010		CAP, S 0.01-25
C610	87-A10-189-040		CAP,E 220-10
C611	87-010-196-010		C-CAP,S 0.1-25 F
C613	87-010-196-010		C-CAP,S 0.1-25 F
C614	87-010-264-040		CAP,E 100-10 5L
C615	87-010-197-010		CAP, S 0.01-25
C617	87-010-494-080		CAP ELECT GAS 1/50
C619	87-010-197-010		CAP, S 0.01-25
C621	87-010-494-080		CAP ELECT GAS 1/50
C622	87-010-493-080		CAP,E 0.47-50 GAS
C630	87-010-178-080		CAP, S 1000P-50
C631	87-010-178-080		CAP, S 1000P-50
C632	87-010-166-080		CAP, S 100P-50
C633	87-010-166-080		CAP, S 100P-50
CN601	87-099-033-010		16P 6216 H
CN602	87-099-201-010		CONN,8P 6216 H
FFC601	8B-CDA-620-010		FF-CABLE,16P FR-MAIN
L602	87-003-097-080		COIL,1.0UH K LAL02
L604	87-003-246-080		C-COIL,2125 33UH K
L608	87-003-231-080		C-COIL,2125 1UH K MLF2012
LED601	8A-CDA-645-010		LED,6224-10ID RED
LED602	8A-CDA-645-010		LED,6224-10ID RED
LED603	8A-CDA-645-010		LED,6224-10ID RED
LED604	8A-CDA-646-010		LED,6224-10GD GRN
LED606	8A-CDA-645-010		LED,6224-10ID RED
LED611	87-A41-066-010		LED,FR-12037G RED
S601	87-A91-704-080		SW,TACT EVQ 214 05R
S602	87-A91-704-080		SW,TACT EVQ 214 05R
S603	87-A91-704-080		SW,TACT EVQ 214 05R
S604	87-A91-704-080		SW,TACT EVQ 214 05R
S605	87-A91-704-080		SW,TACT EVQ 214 05R
S606	87-A91-704-080		SW,TACT EVQ 214 05R
S607	87-A91-704-080		SW,TACT EVQ 214 05R
S608	87-A91-704-080		SW,TACT EVQ 214 05R
S609	87-A91-704-080		SW,TACT EVQ 214 05R
S610	87-A91-704-080		SW,TACT EVQ 214 05R
S611	87-A91-704-080		SW,TACT EVQ 214 05R
S612	87-A91-704-080		SW,TACT EVQ 214 05R

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
X601	87-030-273-010		VIB,XTAL 32.768K5PPM
X602	87-030-376-080		VIB,CER CSA5.76MG200

CD C.B

C30	87-010-260-080		CAP, ELECT 47-25V
C251	87-010-405-080		CAP, ELECT 10-50V
C263	87-010-178-080		CHIP CAP 1000P
C264	87-010-178-080		CHIP CAP 1000P
C265	87-010-263-080		CAP, ELECT 100-10V
C266	87-010-263-080		CAP, ELECT 100-10V
C267	87-010-385-080		CAP, ELECT 220-25V
C268	87-010-385-080		CAP, ELECT 220-25V
C271	87-010-221-080		CAP, ELECT 470-10V
C272	87-010-221-080		CAP, ELECT 470-10V
C278	87-010-385-080		CAP, ELECT 220-25V
C279	87-010-235-080		CAP, ELECT 470-16V
C301	87-016-495-000		CAP,E 3300-25 M SMG
C306	87-010-404-080		CAP, ELECT 4.7-50V
C307	87-010-401-080		CAP, ELECT 1-50V
C308	87-010-221-080		CAP, ELECT 470-10V
C311	87-010-404-080		CAP,ELECT 4.7-50V
C312	87-010-385-080		CAP, ELECT 220-25V
C321	87-010-197-080		CAP, CHIP 0.01 DM
C322	87-010-263-080		CAP, ELECT 100-10V
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-405-080		CAP, ELECT 10-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-197-080		CAP, CHIP 0.01 DM
C403	87-010-263-080		CAP, ELECT 100-10V
C404	87-010-248-080		CAP, ELECT 220-10V
C405	87-010-197-080		CAP, CHIP 0.01 DM
C406	87-010-374-080		CAP, ELECT 47-10V
C407	87-018-131-080		CAP,TC U 1000P-50
C408	87-010-198-080		CAP, CHIP 0.022
C409	87-010-248-080		CAP, ELECT 220-10V
C410	87-010-263-080		CAP, ELECT 100-10V
C411	87-A11-177-080		C-CAP,S 0.15-16 K B
C412	87-010-401-080		CAP, ELECT 1-50V
C413	87-016-369-080		C-CAP,S 0.033-25 B K
C414	87-010-405-080		CAP, ELECT 10-50V
C416	87-010-545-080		CAP, ELECT 0.22-50V
C417	87-012-157-080		C-CAP,S 330P-50 CH
C418	87-010-213-080		C-CAP,S 0.015-50 B
C419	87-A11-608-080		C-CAP,S 0.33-25 K B
C420	87-016-369-080		C-CAP,S 0.033-25 B K
C421	87-A11-177-080		C-CAP,S 0.15-16 K B
C422	87-010-184-080		CHIP CAPACITOR 3300P(K)
C423	87-010-992-080		C-CAP,S 0.047-25 B
C424	87-016-460-080		C-CAP,S 0.22-16 K B
C425	87-018-129-080		CAP,TC U 680P-50 K B
C426	87-A11-608-080		C-CAP,S 0.33-25 K B
C428	87-010-197-080		CAP, CHIP 0.01 DM
C429	87-010-186-080		CAP,CHIP 4700P
C430	87-012-156-080		C-CAP,S 220P-50 CH
C431	87-010-545-080		CAP, ELECT 0.22-50V
C432	87-010-374-080		CAP, ELECT 47-10V
C433	87-010-401-080		CAP, ELECT 1-50V
C434	87-010-184-080		CHIP CAPACITOR 3300P(K)
C435	87-010-197-080		CAP, CHIP 0.01 DM
C436	87-010-374-080		CAP, ELECT 47-10V
C437	87-010-404-080		CAP, ELECT 4.7-50V
C438	87-016-669-080		C-CAP,S 0.1-25 K B
C439	87-010-178-080		CHIP CAP 1000P
C440	87-018-139-080		CAP,TC U 1P-50 CH
C441	87-010-197-080		CAP, CHIP 0.01 DM
C442	87-018-109-080		CAP, TC U 22P-50 SL
C445	87-012-368-080		C-CAP,S 0.1-50 F
C446	87-012-368-080		C-CAP,S 0.1-50 F
C447	87-012-368-080		C-CAP,S 0.1-50 F
C448	87-010-315-080		C-CAP,S 27P-50 CH
C451	87-012-156-080		C-CAP,S 220P-50 CH
C455	87-010-247-080		CAP, ELECT 100-50V
C457	87-010-312-080		C-CAP,S 15P-50 CH
C458	87-010-312-080		C-CAP,S 15P-50 CH
C459	87-010-263-080		CAP, ELECT 100-10V
C460	87-015-819-080		CAPACITOR,0.01
C461	87-010-197-080		CAP, CHIP 0.01 DM
C462	87-010-248-080		CAP, ELECT 220-10V
C463	87-A11-132-080		CAP, TC U 0.01-50 KB
C465	87-010-404-080		CAP, ELECT 4.7-50V
C466	87-012-368-080		C-CAP,S 0.1-50 F
C467	87-010-263-080		CAP, ELECT 100-10V
C469	87-012-154-080		C-CAP,S 150P-50 CH
C470	87-018-209-080		CAP, TC U 0.1-50 ZF
C471	87-018-209-080		CAP, TC U 0.1-50 ZF
C472	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C473	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C474	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C475	87-A11-132-080		CAP, TC U 0.01-50 K B
C476	87-010-236-080		CAP,E 1000-10 SME
C477	87-010-197-080		CAP, CHIP 0.01 DM
C478	87-010-263-080		CAP, ELECT 100-10V
C479	87-010-197-080		CAP, CHIP 0.01 DM
C480	87-010-221-080		CAP, ELECT 470-10V
C481	87-010-405-080		CAP, ELECT 10-50V
C482	87-010-405-080		CAP, ELECT 10-50V
C489	87-012-368-080		C-CAP,S 0.1-50 F
C490	87-012-368-080		C-CAP,S 0.1-50 F
C491	87-A11-132-080		CAP, TC U 0.01-50KB
C492	87-010-221-080		CAP, ELECT 470-10V
C493	87-010-180-080		C-CER 1500P
C501	87-012-368-080		C-CAP,S 0.1-50 F
C502	87-010-322-080		C-CAP,S 100P-50 CH
C503	87-018-119-080		CAP,TC U 100P-50 KB
C504	87-010-322-080		C-CAP,S 100P-50 CH
C505	87-010-322-080		C-CAP,S 100P-50 CH
C506	87-010-322-080		C-CAP,S 100P-50 CH
C510	87-016-669-080		C-CAP,S 0.1-25 K B
C831	87-010-198-080		CAP, CHIP 0.022
CN202	8A-CH4-687-010		CONN,4P V 2.5
CN205	87-A60-109-010		CONN,2P V S2M-2W
CN301	8A-CH4-689-010		CONN,3P V 2.5
CN401	87-A60-424-010		CONN,16P V TOC-B
CN403	87-099-201-010		CONN,8P 6216 H
CN802	8A-CH4-687-010		CONN,4P V 2.5
CNA202	8B-CDA-633-010		CONN ASSY,4P SP
CNA205	8B-CDA-626-010		CONN ASSY,2P DOOR
CNA402	8B-CDA-625-010		CONN ASSY,6P CD-ME
CNA802	8B-CDA-631-010		CONN ASSY,4P TA-ME
FFC401	8B-CDA-621-010		FF-CABLE,16P CD-RF
FFC403	8B-CDA-622-010		FF-CABLE,8P CD-FR
J201	87-A60-420-010		JACK,3.5 ST (MSC)
L401	87-003-102-080		COIL, 10UH
L404	87-003-152-080		COIL, 100UH
R840	87-029-124-010		RES,FUSE 2.2-1/4
SFR430	87-024-437-080		SFR,100K RH063MC
X401	8Z-CD5-633-010		VIB, CER16.93MHZ FCR16.93M2

TUNER C.B

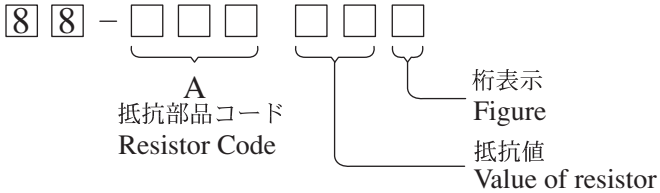
C1	87-010-314-080		C-CAP,S 22P-50V
C2	87-010-316-080		C-CAP,S 33P-50 CH
C3	87-010-314-080		C-CAP,S 22P-50V
C4	87-010-148-080		CAP, CHIP S 4P-50 CH
C5	87-010-378-080		CAP, ELECT 10-16V
C7	87-012-156-080		C-CAP,S 220P-50 CH
C8	87-010-197-080		CAP, CHIP 0.01 DM
C9	87-010-311-080		CAP 12P
C10	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C11	87-010-331-080		C-CAP,S 8P-50 UJ
C12	87-010-314-080		C-CAP,S 22P-50V
C13	87-010-322-080		C-CAP,S 100P-50 CH
C14	87-010-148-080		CAP, CHIP S 4P-50 CH
C15	87-016-669-080		C-CAP,S 0.1-25 K B
C16	87-010-178-080		CHIP CAP 1000P
C17	87-016-669-080		C-CAP,S 0.1-25 K B
C18	87-010-198-080		CAP, CHIP 0.022
C19	87-016-669-080		C-CAP,S 0.1-25 K B
C20	87-010-400-080		CAP, ELECT 0.47-50V
C21	87-010-403-080		CAP, ELECT 3.3-50V
C22	87-010-197-080		CAP, CHIP 0.01 DM
C24	87-010-197-080		CAP, CHIP 0.01 DM
C25	87-010-197-080		CAP, CHIP 0.01 DM
C26	87-012-358-080		C-CAP,S 0.47-10 F Z
C27	87-012-358-080		C-CAP,S 0.47-10 F Z
C28	87-010-992-080		C-CAP,S 0.047-25 B
C29	87-010-992-080		C-CAP,S 0.047-25 B
C30	87-010-248-080		CAP, ELECT 220-10V
C31	87-010-379-080		CAP, ELECT 22-16V
C32	87-010-197-080		CAP, CHIP 0.01 DM
C33	87-010-197-080		CAP, CHIP 0.01 DM
C34	87-010-197-080		CAP, CHIP 0.01 DM
C35	87-010-197-080		CAP, CHIP 0.01 DM
C36	87-010-263-080		CAP, ELECT 100-10V
C37	87-010-197-080		CAP, CHIP 0.01 DM
C38	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-010-197-080		CAP, CHIP 0.01 DM
C56	87-010-327-080		C-CAP,S 4P-50 UJ
CF1	87-A90-128-010		FLTR,AM IF CFAL-455
CF2	87-008-261-010		FILTER, SFE10.7MA5-A
CF3	87-008-261-010		FILTER, SFE10.7MA5-A
CN2	87-A60-116-010		CONN,6P H S2M-6WR
D13	87-A40-916-040		C-VARI-CAP,HVC202A
L2	87-A50-560-010		COIL,FM BPF(ACD)
L3	8A-CD9-660-010		BAR-ANT,MW 2B-ACD(COI)
L4	87-A50-562-010		COIL,FM RF EX(ACD)
L5	87-A50-564-010		COIL,FM OSC EX(ACD)
L6	87-A50-337-010		COIL,AM OSC (TOKO)
L7	87-A50-579-010		COIL,AM IFT(ACD)

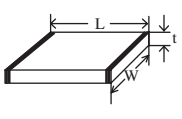
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L8	87-A50-335-010		COIL,FM IFT (TOKO)
L9	87-A50-577-010		COIL,FM DET(ACD)
L10	87-005-849-080		COIL,10UH(CECS)
PVC1	87-A91-167-010		TUN-CAP,20P-160P FA-22125 N000
S1	87-A91-548-010		SW,SL-2-3 SK23E01G06
			POWER C.B
C901	87-010-192-080		C-CAP,S 0.022-50 F
C902	87-010-192-080		C-CAP,S 0.022-50 F
C903	87-010-192-080		C-CAP,S 0.022-50 F
C904	87-010-192-080		C-CAP,S 0.022-50 F
CNA901	8B-CDA-627-010		CONN ASSY,3P PWR
⚠ J901	87-A60-178-010		JACK,AC E W/SW
⚠ PR901	87-A91-940-080		PROTECTOR,2.5A 20P 60V
⚠ PT901	8A-CDA-613-010		PT,H 2.5W
SP901	8A-CDA-214-010		SPR-C,BATT
SP902	8A-CDA-214-010		SPR-C,BATT
			BATT C.B
SP903	8A-CDA-214-010		SPR-C,BATT
SP904	8A-CDA-214-010		SPR-C,BATT
			VOLTAGE SEL C.B
⚠ SW901	87-A91-369-010		SW,AC SL 2-2-2 SDKGA41700
			CD MOTOR C.B
M2	S0-M10-A09-700		MOTOR SLED ASSY
PN402	S2-369-750-000		PLUG,6P
SW1	S4-S13-A01-600		SW,LEAF

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

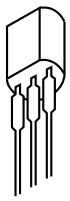
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

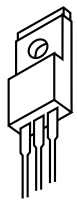
TRANSISTOR ILLUSTRATION



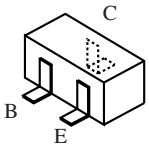
2SA1296GR
2SC1815Y

2SA1979O/Y

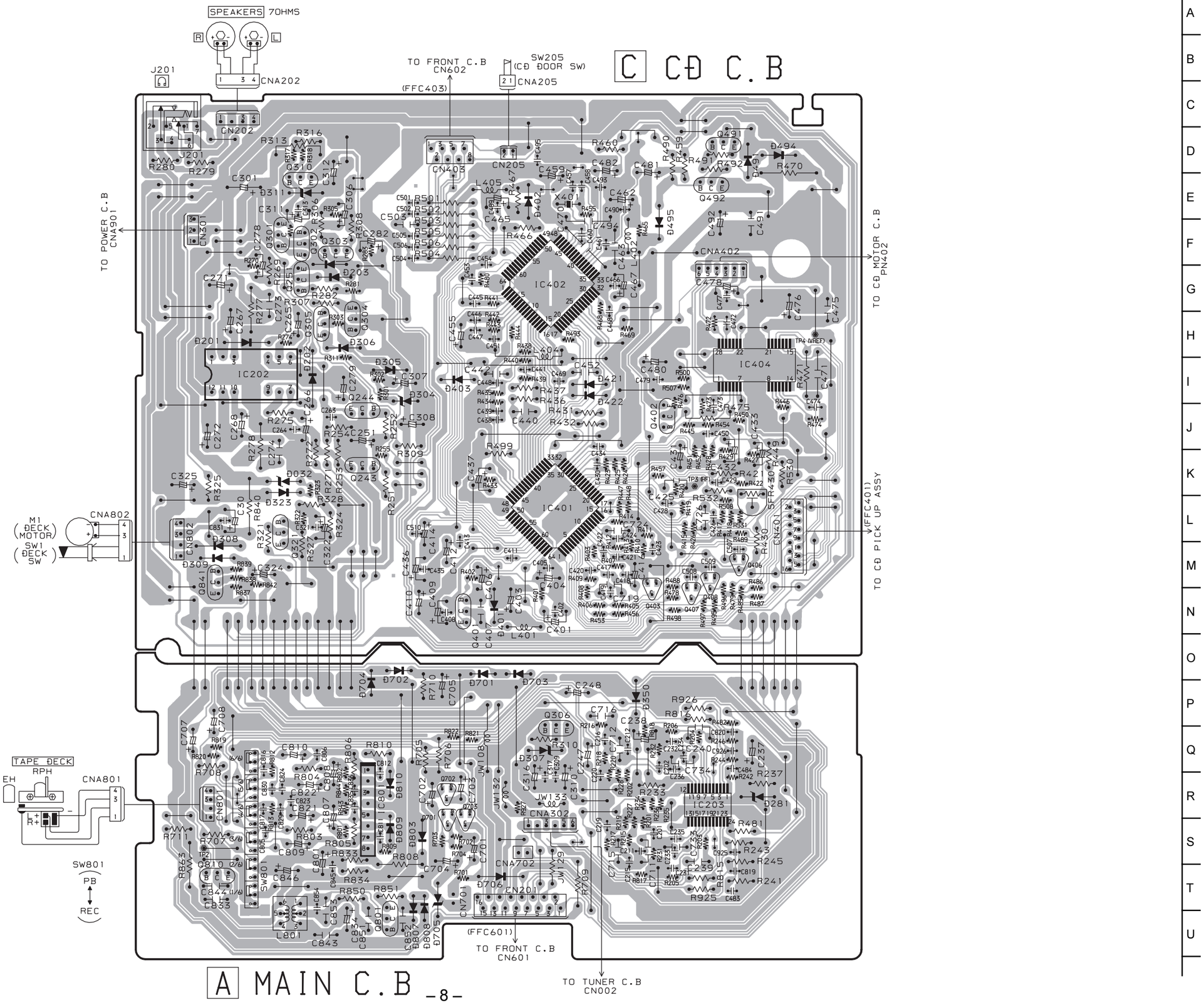
2SA933RS
2SA933SRS
2SC1740SR
2SC1740SRS
DTC124XS
DTC114TS



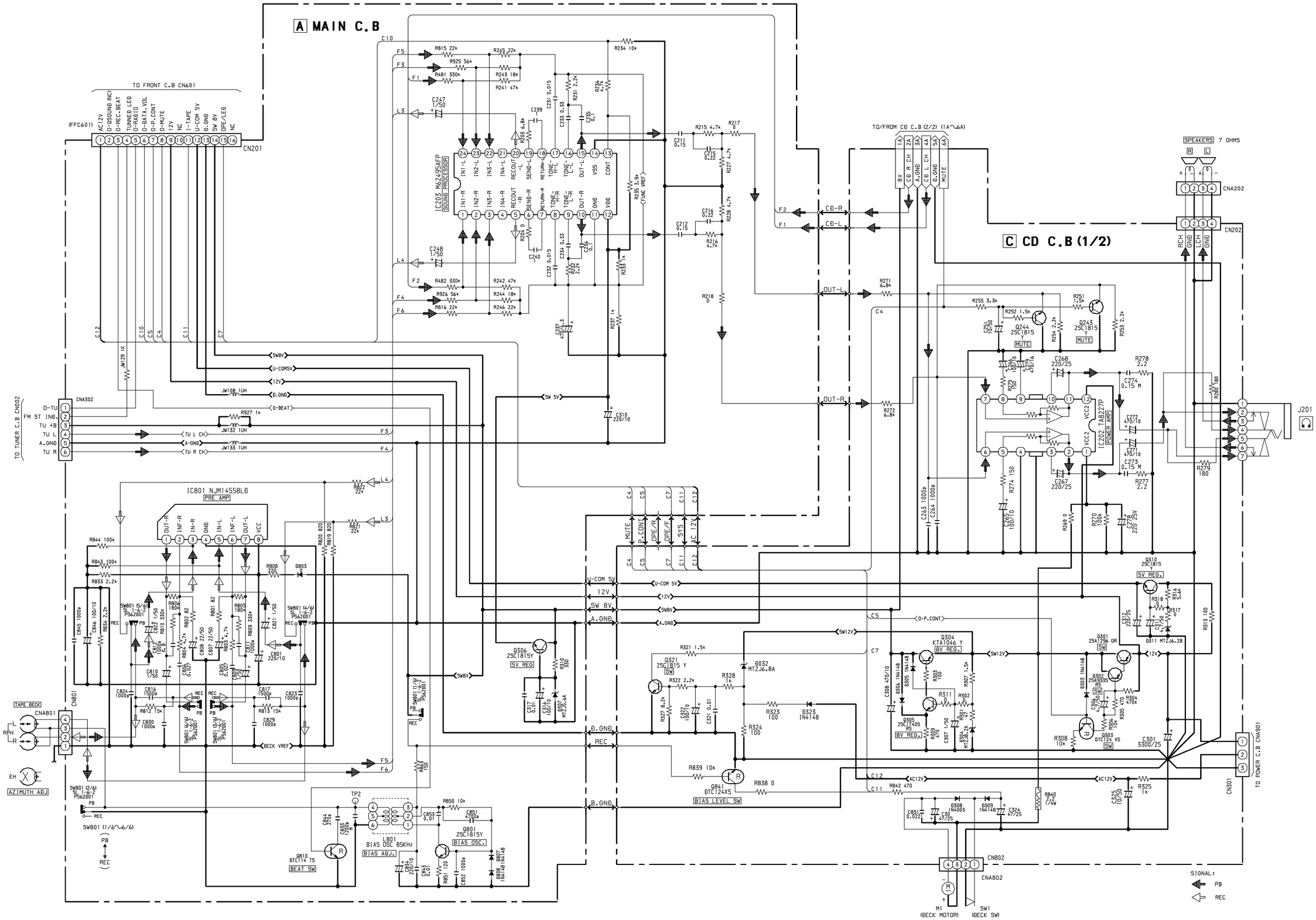
KTA1046Y



2SC2714O
2SC3052F
DTC114YKA
DTC114TKA
DTC124TKA


C CD C.B
SPEAKERS 7OHMS
R
L
CNA202
J201
TO FRONT C.B
CN602
(FFC403)
SW205
(CD DOOR SW)
CNA205
TO POWER C.B
CNA901
TO CD MOTOR C.B
PN402
CNA402
TO CD PICK UP ASSY
(FFC401)
M1
(DECK
MOTOR)
SW1
(DECK
SW)
CNA802
TAPE DECK
EH
RPH
CNA801
SW801
PB
REC
IC202
IC401
IC402
IC404
IC203
CN202
CN205
CN403
CN301
CN802
CN801
CN601
CN201
CN701
CNA302
CNA702
(FFC601)
TO FRONT C.B
CN601
TO TUNER C.B
CN002
A MAIN C.B

SCHEMATIC DIAGRAM – 1 (MAIN / CD : 1 / 2)



C CD C.B (2/2)

IC401 LA9241ML ASP

IC402 LC78622NE DSP

IC404 MM1469XH

X401 VIB.CER16.93MHz

Q401 2SA933 R5 APC

Q403 DTC114 TKA TRACKING GAIN UP (CD RW PLAY)

Q406 DTC114 TKA

Q407 DTC114 YKA

Q408 DTC114 YKA

Q406~408 ANALOG SW (CD→CD RW)

Q491 2SA1296 GR +B SW.

Q492 DTC124 XS +B SW. CONTROL

SFR430 100K H RH0643MC FOCUS BIAS ADJUST

CD OPTICAL PICKUP ASSY SF-P101NR

H CD MOTOR C.B

CN1 (FFC401) CN401

CN402 PN402

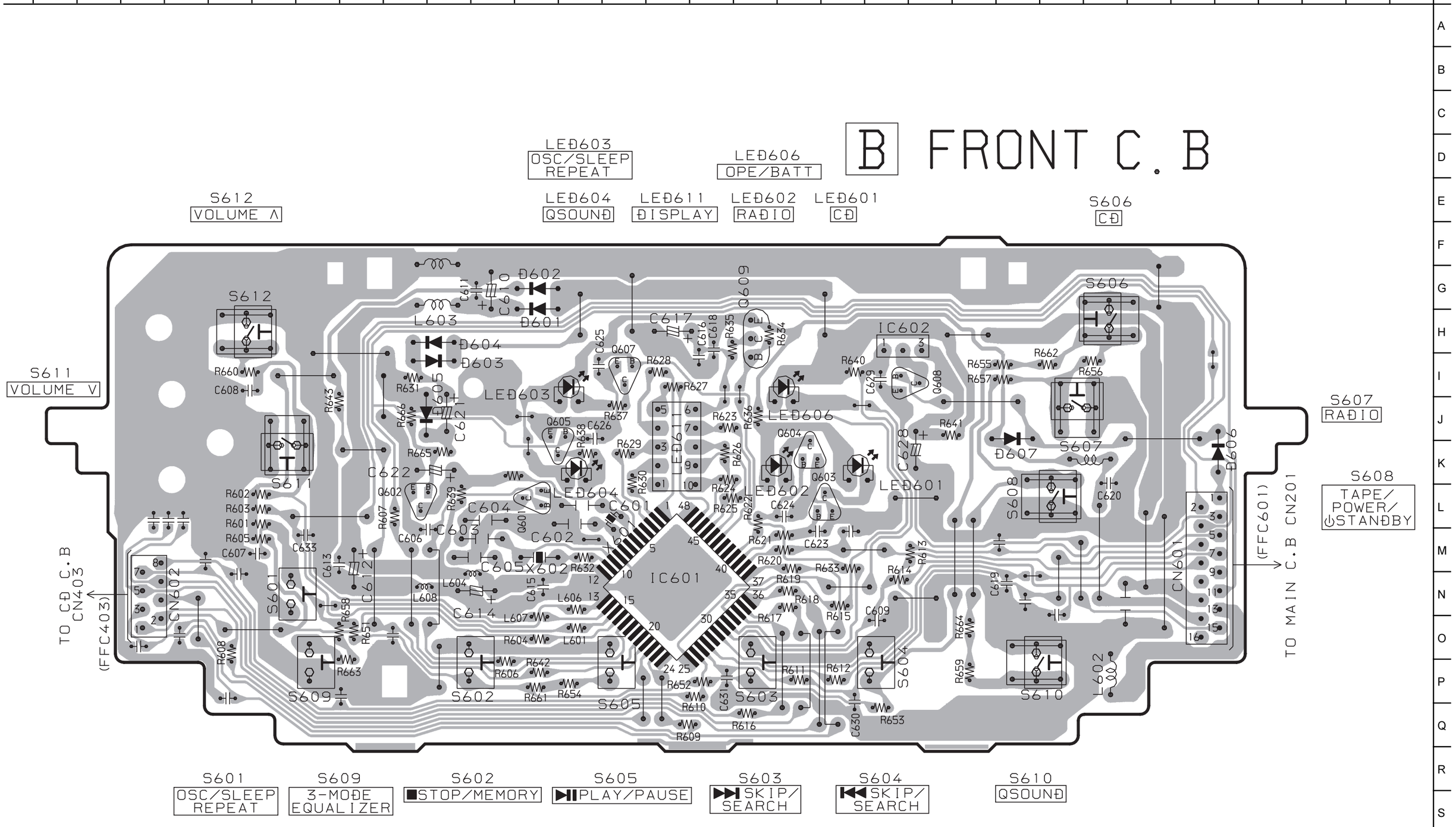
CN403 (FFC403) TO FRONT C.B CN602

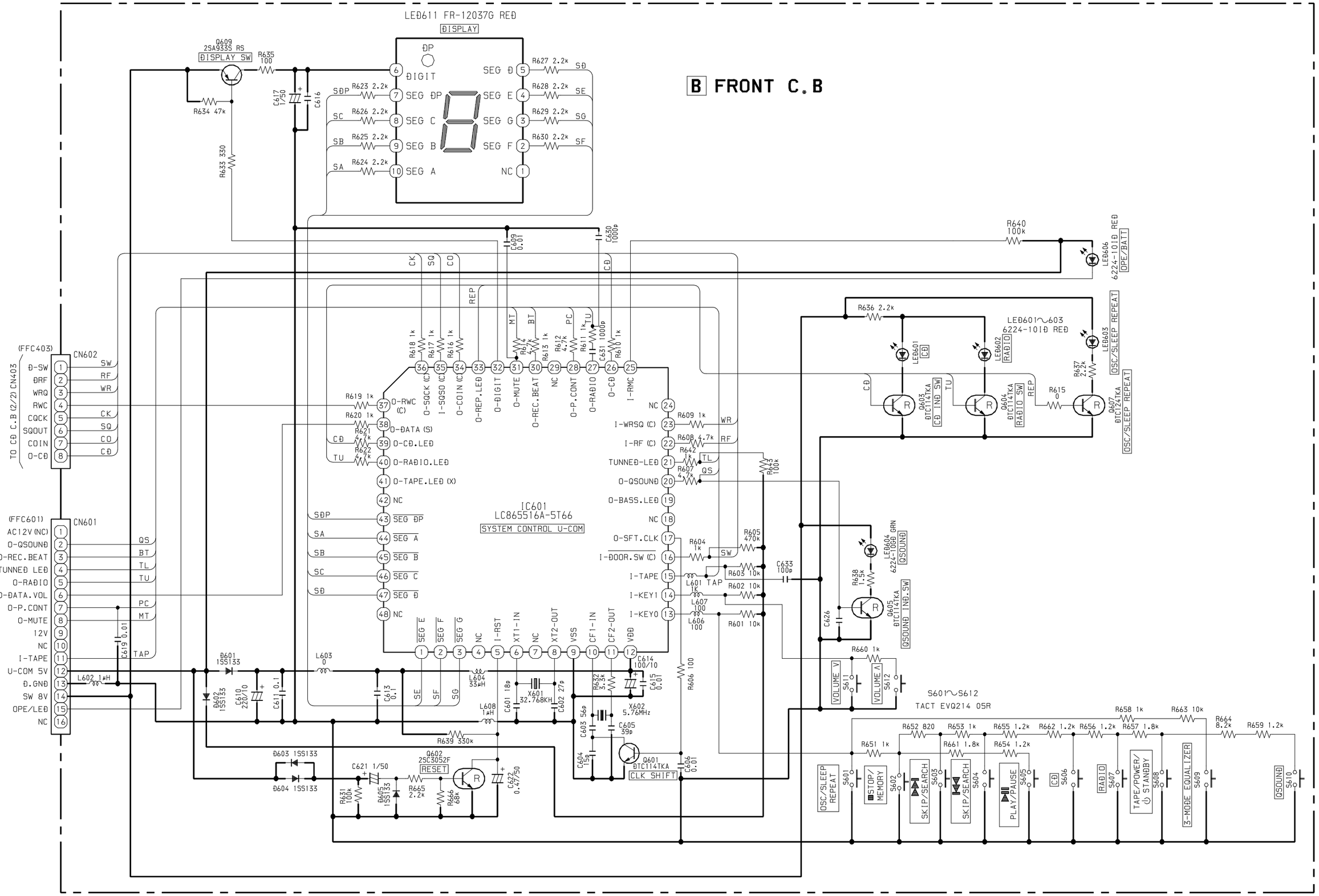
CN205 CNA205 SW205 (CD DOOR SW)

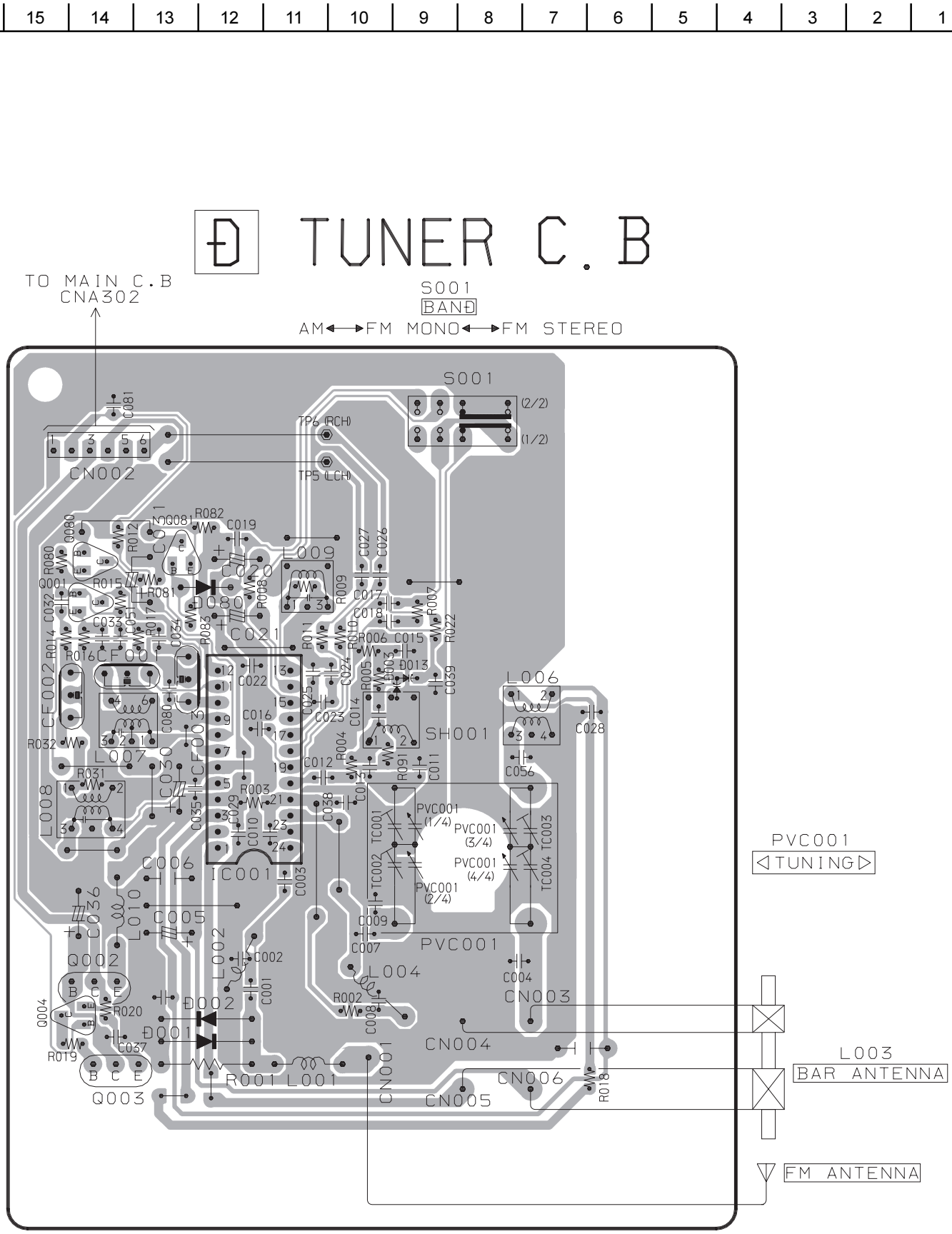
TO/FROM CD C.B (1/2) (1A~6A)

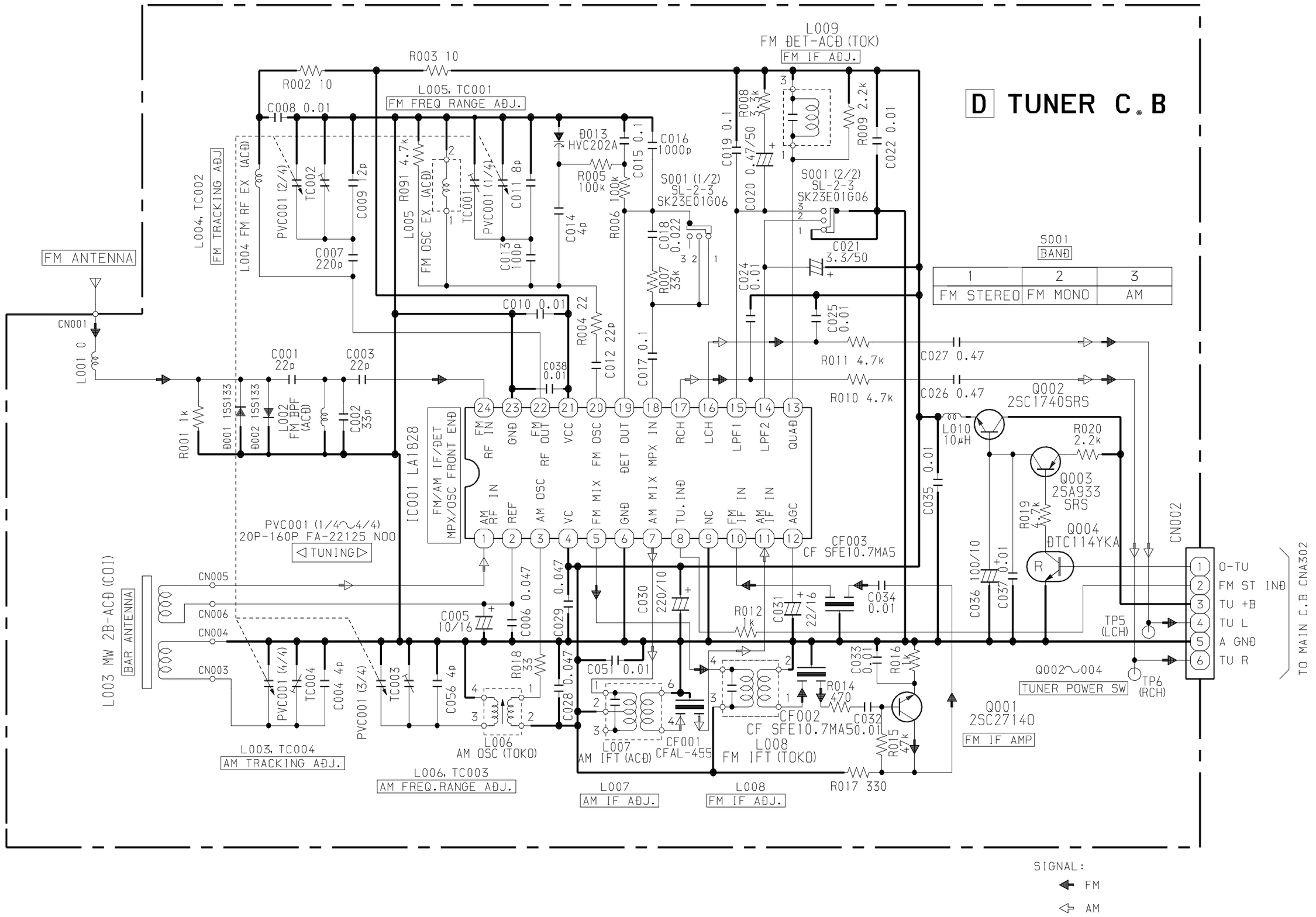
SIGNAL: PB

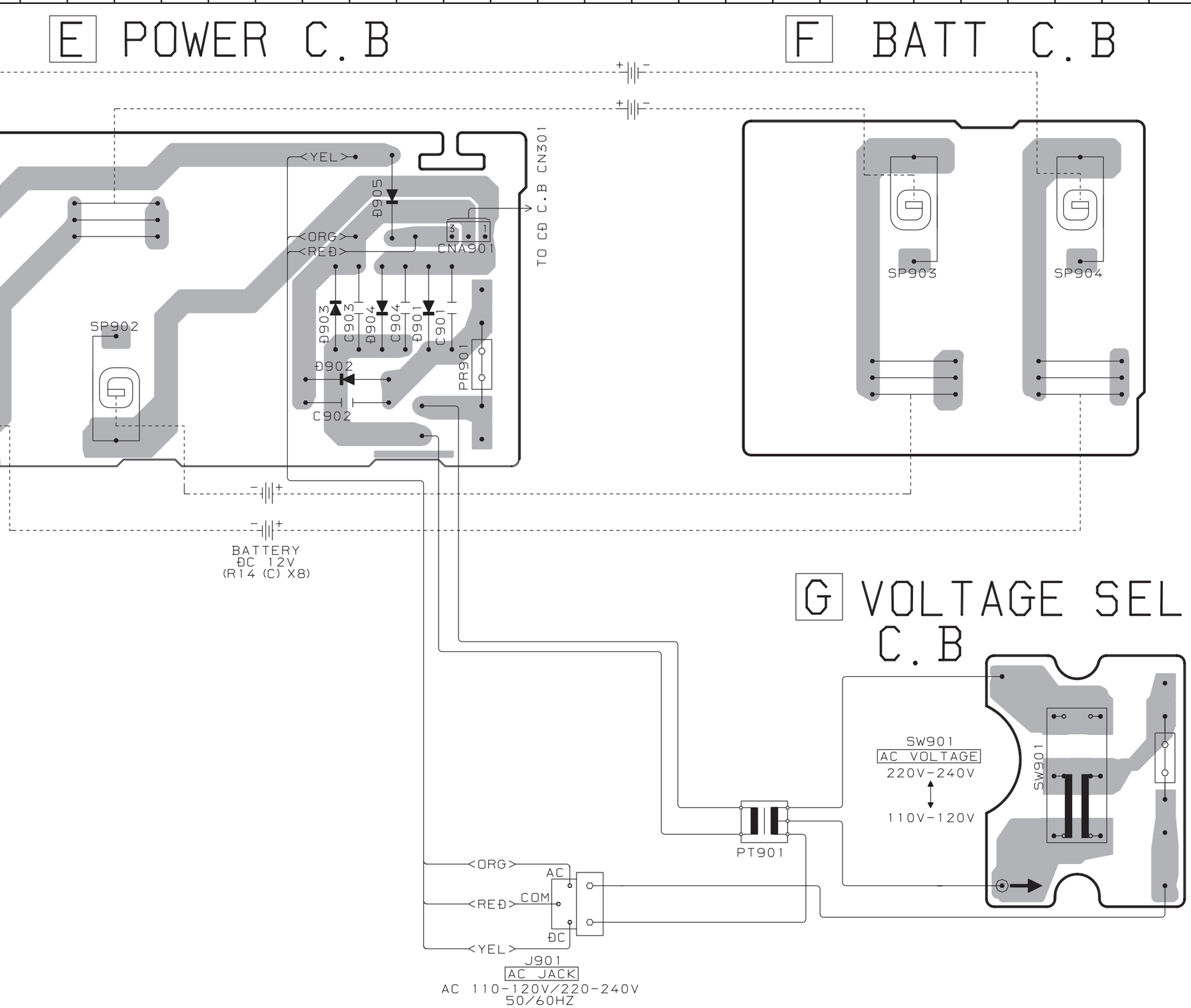
B FRONT C.B


LEĐ603
OSC/SLEEP
REPEAT
LEĐ606
OPE/BATT
LEĐ604
QSOUNĐ
LEĐ611
ĐISPLAY
LEĐ602
RAĐIO
LEĐ601
CĐ
S612
VOLUME ∧
S606
CĐ
S611
VOLUME ∨
S607
RAĐIO
S608
TAPE/
POWER/
⏻STANĐBY
TO CĐ C.B
CN403
(FFC403)
TO MAIN C.B CN201
(FFC601)
IC601
IC602
S601
OSC/SLEEP
REPEAT
S609
3-MOĐE
EQUALIZER
S602
■STOP/MEMORY
S605
⏯PLAY/PAUSE
S603
⏭SKIP/
SEARCH
S604
⏮SKIP/
SEARCH
S610
QSOUNĐ

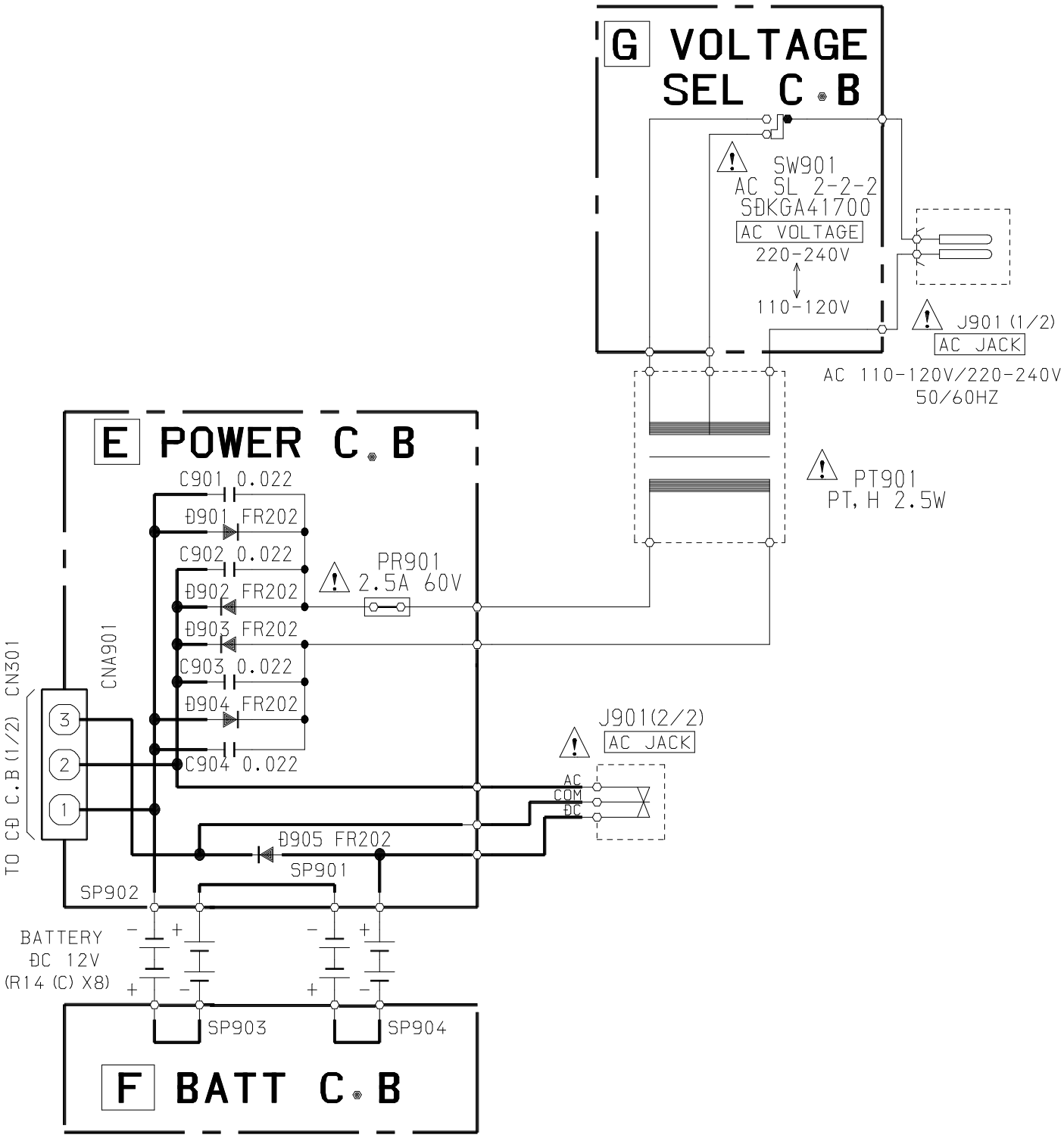

B FRONT C.B
LEÐ611 FR-12037G REÐ
DISPLAY
Q609 2SA933S RS
DISPLAY SW
R635 100
R634 47k
R633 330
C617 1/50
C616
ÐP
ÐIGIT
SEG Ð
SEG ÐP
SEG E
SEG C
SEG G
SEG B
SEG F
SEG A
NC
SÐP
SA
SB
SC
SÐ
SE
SG
SF
R623 2.2k
R624 2.2k
R625 2.2k
R626 2.2k
R627 2.2k
R628 2.2k
R629 2.2k
R630 2.2k
C609 0.01
C650 1000p
R640 100k
LEÐ606 6224-101Ð REÐ
ÐPE/BATT
CK
SQ
CO
CÐ
REP
MT
BT
PC
TU
R618 1k
R617 1k
R616 1k
R614 4.7k
R613 1k
R612 4.7k
R611 1k
C631 1000p
R610 1k
R636 2.2k
LEÐ601~603 6224-101Ð REÐ
LEÐ601 CÐ
LEÐ602 RAÐIO
LEÐ603 OSC/SLEEP REPEAT
R637 2.2k
Q603 DTC114TKA CÐ IND SW
Q604 DTC114TKA RADIO SW
Q607 DTC124TKA OSC/SLEEP REPEAT
R615 0
(FFC403)
CN602
TO CÐ C.B (2/2) CN403
Ð-SW
ÐRF
WRQ
RWC
CQCK
SQOUT
COIN
O-CÐ
SW
RF
WR
CK
SQ
CO
CÐ
R619 1k
R620 1k
R621 4.7k
R622 4.7k
O-RWC (C)
O-ÐATA (S)
O-CÐ.LEÐ
O-RAÐIO.LEÐ
O-TAPE.LEÐ (X)
NC
O-SQCK (C)
I-SQSO (C)
O-COIN (C)
O-REP.LEÐ
O-ÐIGIT
O-MUTE
O-REC.BEAT
NC
O-P.CONT
O-RAÐIO
O-CÐ
I-RMC
NC
I-WRSQ (C)
I-RF (C)
TUNNEÐ-LEÐ
O-QSOUNÐ
O-BASS.LEÐ
NC
O-SFT.CLK
I-ÐOOR.SW (C)
I-TAPE
I-KEY1
I-KEY0
R609 1k
R608 4.7k
R642 1k
R607 4.7k
R643 100k
R604 1k
R605 470k
R603 10k
R602 10k
R601 10k
C633 100p
L601 TAP
L607 100
L606 100
LEÐ604 622-1106Ð GRN
QSOUNÐ
R638 1.5k
Q605 DTC114TKA
QSOUNÐ IND.SW
C626
R660 1k
VOLUME V
VOLUME A
S611
S612
S601~S612
TACT EVQ214 05R
(FFC601)
CN601
TO MAIN C.B CN201
AC12V (NC)
O-QSOUNÐ
O-REC.BEAT
TUNNEÐ LEÐ
O-RAÐIO
O-ÐATA.VOL
O-P.CONT
O-MUTE
12V
NC
I-TAPE
U-COM 5V
Ð.GNÐ
SW 8V
OPE/LEÐ
NC
QS
BT
TL
TU
PC
MT
TAP
C619 0.01
L602 1µH
Ð601 1SS133
L603 0
C610 220/10
C611 0.1
C613 0.1
Ð602 1SS133
L604 33µH
L608 1µH
C601 18p
X601 32.768KH
C602 27p
R632 3.3k
C603 56p
X602 5.76MHz
C605 39p
C604 15p
Q601 DTC114TKA
CLK SHIFT
C606 0.01
R606 100
C614 100/10
C615 0.01
R639 330k
Ð603 1SS133
Ð604 1SS133
C621 1/50
Q602 2SC3052F
RESET
R631 100k
Ð605 1SS133
R665 2.2k
R666 68k
C622 0.47/50
IC601
LC865516A-5T66
SYSTEM CONTROL U-COM
SEG E
SEG F
SEG G
NC
I-RST
XT1-IN
NC
XT2-OUT
VSS
CF1-IN
CF2-OUT
VÐÐ
R652 820
R653 1k
R655 1.2k
R662 1.2k
R656 1.2k
R657 1.8k
R658 1k
R663 10k
R664 8.2k
R659 1.2k
R651 1k
R661 1.8k
R654 1.2k
OSC/SLEEP REPEAT
S601
STOP/ MEMORY
S602
SKIP/SEARCH
S603
SKIP/SEARCH
S604
PLAY/PAUSE
S605
CÐ
S606
RADIO
S607
TAPE/POWER/ STANÐBY
S608
3-MODE EQUALIZER
S609
QSOUNÐ
S610


Đ TUNER C.B
TO MAIN C.B
CNA302
S001
BANĐ
AM ◄►FM MONO ◄►FM STEREO
S001
(2/2)
(1/2)
TP6 (RCH)
TP5 (LCH)
CN002
PVC001
◁TUNING▷
L003
BAR ANTENNA
FM ANTENNA


D TUNER C.B
FM ANTENNA
CN001
L001 0
L004, TC002
FM TRACKING ADJ
L004 FM RF EX (ACĐ)
L005, TC001
FM FREQ RANGE AĐJ.
L005 FM OSC EX (ACĐ)
L009
FM ĐET-ACĐ (TOK)
FM IF AĐJ.
R003 10
R002 10
C008 0.01
R091 4.7k
PVC001 (2/4)
TC002
C009 2p
C007 220p
TC001
PVC001 (1/4)
C011 8p
C013 100p
Đ013 HVC202A
R005 100k
C014 4p
C015 0.1
C016 1000p
R006 100k
C018 0.022
R007 33k
S001 (1/2) SL-2-3 SK23E01G06
S001 (2/2) SL-2-3 SK23E01G06
C019 0.1
R008 3.3k
C020 0.47/50
R009 2.2k
C022 0.01
C021 3.3/50
C024 0.01
C025 0.01
S001 BANĐ
1 FM STEREO
2 FM MONO
3 AM
C010 0.01
R004 22
C012 22p
C017 0.1
C038 0.01
C001 22p
C003 22p
R001 1k
Đ001 1SS133
Đ002 1SS133
L002 FM BPF (ACĐ)
C002 33p
R011 4.7k
R010 4.7k
C027 0.47
C026 0.47
Q002 2SC1740SRS
L010 10μH
R020 2.2k
Q003 2SA933 SRS
R019 4.7k
Q004 ĐTC114YKA
C035 0.01
C036 100/10
C037 0.01
CN002
O-TU
FM ST IN
TU +B
TU L
A GNĐ
TU R
TO MAIN C.B CNA302
TP5 (LCH)
TP6 (RCH)
Q002~004
TUNER POWER SW
Q001 2SC2714O
FM IF AMP
IC001 LA1828
FM/AM IF/ĐET
MPX/OSC FRONT ENĐ
FM IN RF IN
GNĐ
FM OUT RF OSC
VCC
FM MIX FM OSC
ĐET OUT
AM MIX MPX IN
TU.INĐ
RCH
LCH
LPF1
LPF2
QUAĐ
AM RF IN
REF
AM OSC
VC
GNĐ
FM MIX
AM MIX
TU.INĐ
NC
FM IF IN
AM IF IN
AGC
PVC001 (1/4~4/4) 20P-160P FA-22125 NOO
TUNING
CF003 CF SFE10.7MA5
L003 MW 2B-ACĐ (COI)
BAR ANTENNA
CN005
CN006
CN004
CN003
C005 10/16
C006 0.047
C029 0.047
C030 220/10
C031 22/16
C034 0.01
R012 1k
R018 33
C028 0.047
C051 0.01
C033 0.01
R016 1k
R014 470
C032
R015 47k
CF002 CF SFE10.7MA50.01
CF001 CFAL-455
L003, TC004
AM TRACKING AĐJ.
L006, TC003
AM FREQ.RANGE AĐJ.
L006 AM OSC (TOKO)
L007 AM IFT (ACĐ)
L008 FM IFT (TOKO)
R017 330
L007 AM IF AĐJ.
L008 FM IF AĐJ.
SIGNAL:
FM
AM


E POWER C.B
F BATT C.B
G VOLTAGE SEL C.B
TO CĐ C.B CN301
YEL
ORG
REĐ
CNA901
Đ905
Đ903
C903
Đ904
C904
Đ901
C901
Đ902
C902
PR901
SP901
SP902
SP903
SP904
BATTERY
ĐC 12V
(R14 (C) X8)
PT901
SW901
AC VOLTAGE
220V-240V
110V-120V
Sw901
AC
COM
ĐC
J901
AC JACK
AC 110-120V/220-240V
50/60HZ

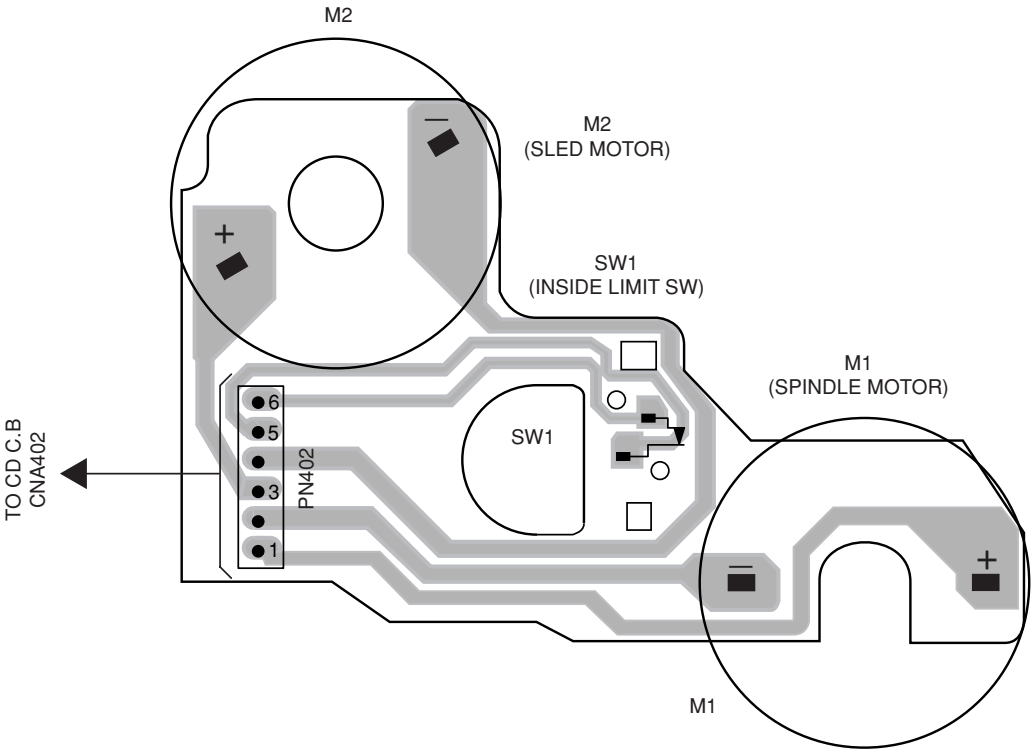
SCHEMATIC DIAGRAM – 5 (POWER / BATT / VOLTAGE SEL)



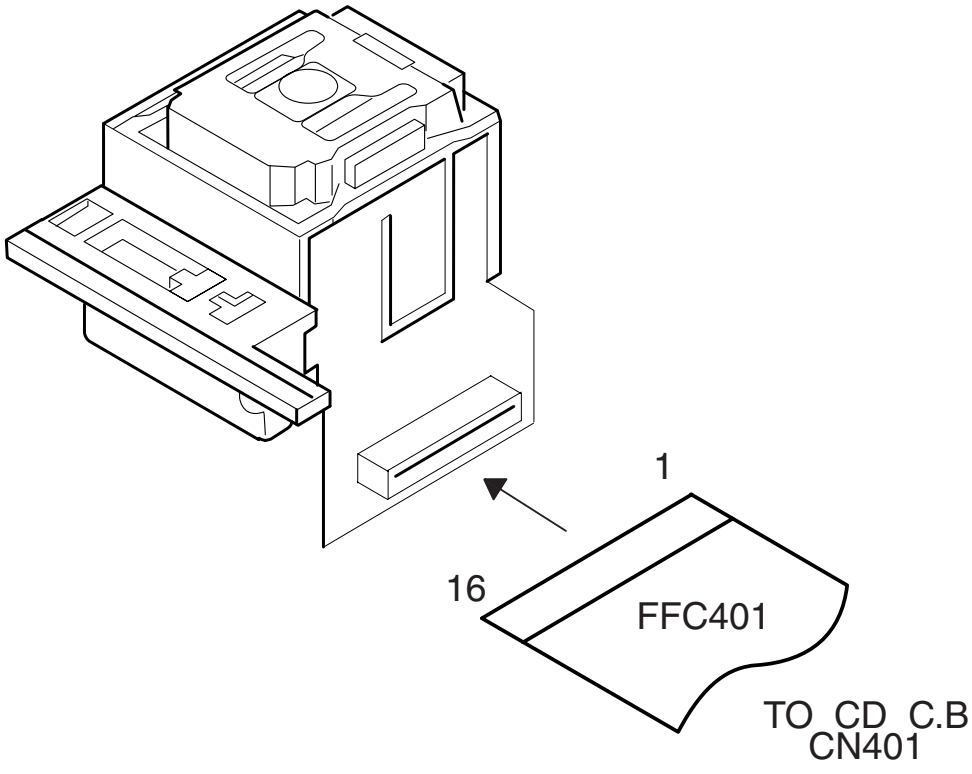
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

H CD MOTOR C.B

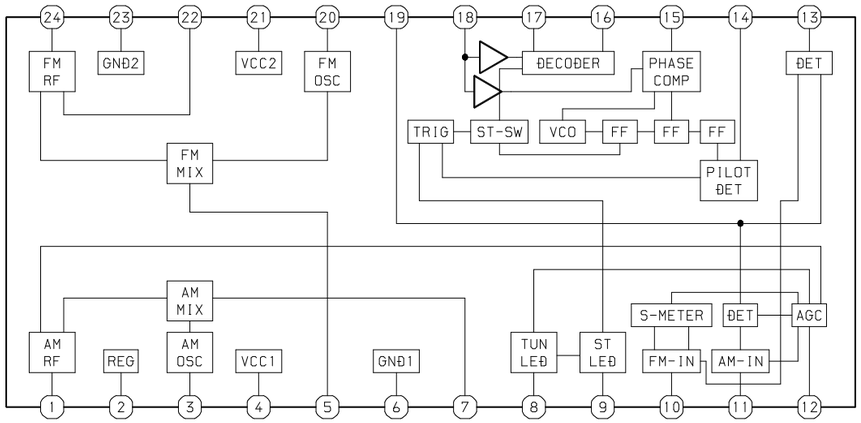


CD PICK UP ASSY
SF-P101NR

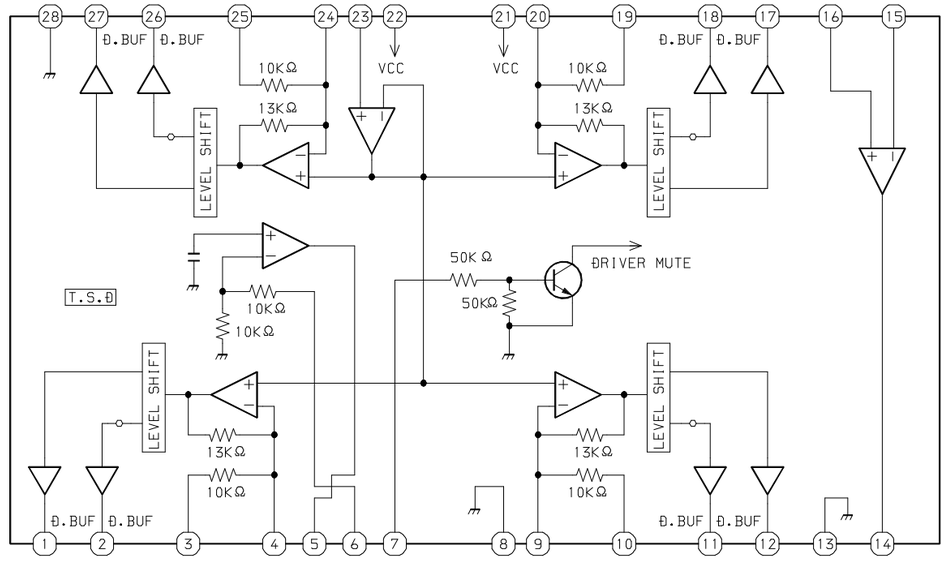


IC BLOCK DIAGRAM

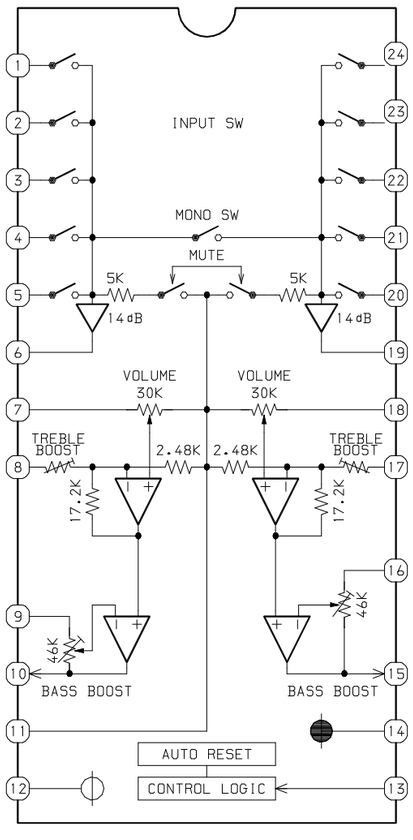
IC, LA1828



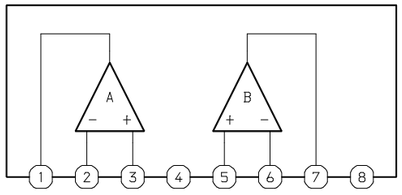
IC, MM1469XH



IC, M62495AFP



IC, NJM14558LÐ



ADJUSTMENT <RADIO / TAPE / CD>

< RADIO SECTION >

1. AM Frequency Range Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L006 ..... 517kHz
   TC003 ..... 1750kHz

2. AM Tracking Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L003 ..... 600kHz
   TC004 ..... 1400kHz

3. AM IF Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L007 ..... 455kHz

4. FM Frequency Range Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L005 ..... 87MHz
   TC001 ..... 109MHz

5. FM Tracking Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L004 ..... 88MHz
   TC002 ..... 108MHz

6. FM IF Adjustment
   • Test Point: TP5 (LCH), TP6 (RCH)
   • Adjustment location:
   L008, L009 ..... 10.7MHz

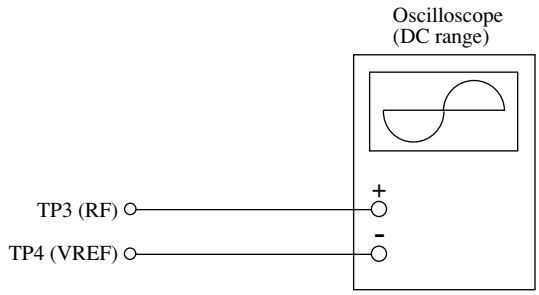
< TAPE RECORDER SECTION >

1. Bias Adjustment
   Settings: • Test tape: TTA-630
   • Test point: TP2
   • Adjustment location:
   L801 ..... 85kHz±2kHz

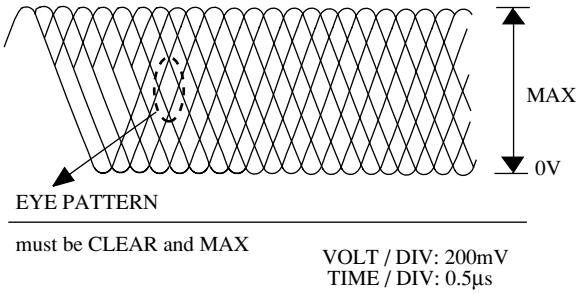
2. Azimuth Adjustment
   Settings: • Test tape: TTA-320
   • Test point: PHONE JACK (J201)
   • Adjustment location: Azimuth adjustment screw
   Method: Play back the test tape and adjust the screw so that the output is maximum.

< CD SECTION >

1. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.



1) Connect an oscilloscope to the test point TP3 (RF) and TP4 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR430 so that the RF signal at the test point TP3 (RF) is MAX and CLEAREST.



IC DESCRIPTION

IC, LC78622NE

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input. ("L" is applied when not used.)
2	TAI	I	For PLL/Test input. (Connected to 0V)
3	PDO	O	Phase comparison output to control the external VCO.
4	VVSS	–	Ground of the built-in VCO. Normally 0V.
5	ISET	I	For the connection of a resistor which adjusts the PDO output current.
6	VVDD	–	Power supply of the built-in VCO.
7	FR	I	Adjusts the VCO frequency range.
8	VSS	–	Ground of digital circuits. Normally 0V.
9	EFMO	O	For slice level control/EFM signal output.
10	EFMIN	I	EFM signal input.
11	T2	I	Test input. A pull-down resistor is incorporated. (Connected to 0V)
12	CLV+	O	Disc motor control tri-state output.
13	CLV-		
14	V/$\overline{P}$	O	Output to monitor the automatic switching between the rough servo control and phase servo control. "H" : Rough servo, "L": Phase servo.
15	HFL	I	Track detection signal input. Schmitt trigger input.
16	TES	I	Track error signal input. Schmitt trigger input.
17	TOFF	O	Tracking off output.
18	TGL	O	Tracking gain switching output. "L" raises the gain.
19	JP+	O	Track jump control tri-state output.
20	JP-		
21	PCK	O	Monitors the clock signal for EFM data playback. 4.3218MHz when the phase is locked. (Not used)
22	FSEQ	O	Sync signal detection output. Goes "H" when the sync signal detected from the EFM signal matches the sync signal generated internally. (Not used)
23	VDD	–	Power supply of digital circuits.
24	SL+	O	Controlled by serial data command issued by the microprocessor.
25	SL–	O	Controlled by serial data command issued by the microprocessor.
26	NC	–	Not connected.
27	PU IN	I	CD pickup inside limit switch.
28	RW	O	CD-RW disc select control.
29	EMPH	O	Deemphasis monitor. "H": when playing a deemphasis disc. (Not used)
30	C2F	O	C2 flag output. (Not used)
31	DOUT	O	Output a digital OUT signal. (EIAJ format) (Not used)
32	T3	I	Test input. (Connected to 0V)
33	T4		
34	NC	–	Not connected.
35	MUTEL	O	Lch 1-bit DAC/Lch muting output. (Not used)
36	LVDD	–	Lch power supply.
37	LCHO	O	Lch output.
38	LVSS	–	Lch ground. Normally 0V.

Pin No.	Pin Name	I/O	Description
39	RVSS	–	Rch 1-bit DAC/Rch ground. Normally 0V.
40	RCHO	O	Rch output.
41	RVDD	–	Rch power supply.
42	MUTER	O	Rch muting output. (Not used)
43	XVDD	–	Power supply of crystal oscillator.
44	XOUT	O	For the connection of a 16.93MHz crystal oscillator.
45	XIN	I	
46	XVSS	–	Ground of crystal oscillator. Normally 0V.
47	SBSY	O	Subcode block sync signal output. (Not used)
48	EFLG	O	C1, C2, single, duplex correction monitor. (Not used)
49	PW	O	Output of subcodes P, Q, R, S, T, U and W. (Not used)
50	SFSY	O	Subcode frame sync signal output. Falls when the subcode is set to the standby state. (No used)
51	SBCK	I	Subcode read-out clock input. Schmitt trigger input. ("L" is applied when not used.) (Connected to 0V)
52	FSX	O	7.35kHz sync signal output obtained by dividing the oscillator frequency. (Not used)
53	WRQ	O	Subcode Q standby output.
54	RWC	I	Read/write control input. Schmitt trigger input.
55	SQOUT	O	Subcode Q output.
56	COIN	I	Command input from the microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input retrieval clock or subcode retrieval clock input from SQOUT. Schmitt trigger input.
58	RES	I	LC78622NE reset input.
59	T11	O	Test output. Set to open (normally "L" output.) (Not used)
60	16M	O	16.9344MHz output. (Not used)
61	4.2M	O	4.236MHz output.
62	T5	I	Test input. A pull-down resistor is incorporated. (Connected to 0V)
63	$\overline{\text{CS}}$	I	Chip select input. (Connected to 0V)
64	T1	I	Test input with no pull-down resistor. (Connected to 0V)

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	For the connection of the pickup photodiode. Addition to the FIN1 pin creates an RF signal and subtraction from it create an EF signal.
2	FIN1	I	For the connection of the pickup photodiode.
3	E	I	For the connection of the pickup photodiode. Subtraction from the F pin creates a TE signal.
4	F	I	For the connection of the pickup photodiode.
5	TB	I	Inputs the DC components in the TE signal.
6	TE–	I	For the connection of a resistor which sets the gain of the TE signal between this pin and the TE pin.
7	TE	O	TE signal output.
8	TESI	I	TES (track error sense) comparator input. The TE signal is passed through a BPF.
9	SCI	I	Shock detection input.
10	TH	I	Sets the time constant for the tracking gain.
11	TA	O	TA amp output.
12	TD–	I	Composes the tracking phase compensation constant between the TD and VR pins.
13	TD	O	Sets the tracking phase compensation.
14	JP	I	Sets the amplitude of the tracking jump signal (kick pulses).
15	TO	O	Tracking control signal output.
16	FD	O	Focusing control signal output.
17	FD–	I	Composes the focusing phase compensation constant between the FD and FA pins.
18	FA	O	Composes the focusing phase compensation constant between the FD- and FA- pins.
19	FA–	I	Composes the focusing phase compensation constant between the FA and FE pins.
20	FE	O	FE signal output.
21	FE–	I	For the connection of a resistor whichs sets the gain of the FE signal between this pin and the TE pin.
22	A-GND	–	Ground of analog signals.
23	SP	O	Single-ended output of the signals input to the CV+ and CV- pins.
24	SPI	I	Spindle amp input.
25	SPG	I	For the connection of a resistor which sets the gain in the spindle 12cm mode. (Not used)
26	SP–	I	For the connection of the spindle phase compensation constant with the SPD pin.
27	SPD	O	Spindle control signal output.
28	SLEQ	I	For the connection of sled phase compensation constant.
29	SLD	O	Sled control signal output.
30	SL–	I	Sled feed signal input from the microprocessor.
31	SL+		
32	JP–	I	Tracking signal input from the DSP.
33	JP+		
34	TGL	I	Tracking gain control signal input from the DSP. Low gain when TGL is "H".
35	TOFF	I	Tracking off control signal input from the DSP. Off when TOFF is "H".
36	TES	O	Outputs the TES signal to the DSP.

Pin No.	Pin Name	I/O	Description
37	HFL	O	The HFL (high frequency level) signal is used to judge whether the main beam is positioned on the pit or on the mirror.
38	SLOF	I	Sled servo off control input.
39	CV–	I	CLV error signal input from the DSP.
40	CV+		
41	RFSM	O	RF output.
42	RFS–	O	Sets the RF gain and the EFM signal's 3T compensation constant together with the RFSM pin.
43	SLC	O	The SLC (slice level control) signal is output to control the DSP's data slice level of the RF waveform.
44	SLI	I	Input to control the DSP's data slice level.
45	D-GND	–	Ground of digital signals.
46	FSC	O	Output for the focus search smoothing capacitor.
47	TBC	I	The TBC (tracking balance control) signal sets the EF balance variation range.
48	NC	–	Not connected.
49	DEF	O	Disc defect detection output.
50	CLK	I	Reference clock input. 4.23MHz is input from the DSP.
51	CL	I	Microprocessor command clock input.
52	DAT	I	Microprocessor command data input.
53	CE	I	Microprocessor chip enable input.
54	DRF	O	DRF (detect RF) is an output to detect the RF level.
55	FSS	I	The FSS (focus search select) signal switches the focus search modes (+/-search / +search with respect to the reference voltage). (Not used)
56	VCC2	–	VCC of servo and digital circuits.
57	REFI	–	For the connection of bypass capacitor for the reference voltage.
58	VR	O	Reference voltage output.
59	LF2	–	Sets the time constant for disc defect detection.
60	PH1	–	For the connection of a capacitor to hold the RF signal peak.
61	BH1	–	For the connection of a capacitor to hold the RF signal bottom.
62	LDD	O	APC circuit output.
63	LDS	I	APC circuit input.
64	VCC1	–	VCC of RF signal circuits.

IC, LC865516A-5T66

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SEG E}}$	O	SEG E control.
2	$\overline{\text{SEG F}}$	O	SEG F control.
3	$\overline{\text{SEG G}}$	O	SEG G control.
4	NC	-	Not connected.
5	I-RST	I	Microprocessor reset input.
6	XT1-IN	I	Connected to an external 32.768 kHz crystal oscillator.
7	NC	-	Not connected.
8	XT2-OUT	O	Connected to an external 32.768 kHz crystal oscillator.
9	VSS	-	GND.
10	CF1-IN	I	Connected to an external 5.76 MHz ceramic filter.
11	CF2-OUT	O	Connected to an external 5.76 MHz ceramic filter.
12	VDD	-	Microprocessor power supply (+5 V).
13	I-KEY0	I	Key AD input. (AD)
14	I-KEY1	I	Key AD input. (AD)
15	I-TAPE	I	Deck status input. (AD)
16	I-$\overline{\text{DOOR SW (C)}}$	I	CD door switch status input.
17	O-SFT.CLK	O	Main clock shift output.
18	NC	-	Not connected.
19	O-BASS.LED	O	BASS LED ON/OFF control output. (Not used)
20	O-QSOUND	O	QSOUND LED ON/OFF control output.
21	TUNNED-LED	O	TUN LED ON/OFF control output.
22	I-RF(C)	I	CD RF level detection input.
23	I-WRSQ(C)	I	CD subcode Q standby input.
24	NC	-	Not connected.
25	I-RMC	I	Remote control input.
26	O-CD	O	CD power control output.
27	O-RADIO	O	RADIO power control output.
28	O-P.CONT	O	The main power supply control output.
29	NC	-	Not connected.
30	O-REC.BEAT	O	Beat switch control output.
31	O-MUTE	O	Main mute output.
32	O-DIGIT	O	7-segment LED power supply control output.
33	O-REP.LED	O	REPEAT LED ON/OFF control output.
34	O-COIN(C)	O	CD command output.
35	I-SQSO(C)	I	CD subcode Q input.
36	O-SQCK(C)	O	CD command/CLK for subcode.
37	O-RWC(C)	O	CD read/write control output.
38	O-DATA(S)	O	Data output to M62495AFP.
39	O-CD.LED	O	LED ON/OFF control output for the CD function.
40	O-RADIO.LED	O	LED ON/OFF control output for the RADIO function.
41	O-TAPE.LED(X)	O	LED ON/OFF control output for the TAPE function. (Not used)

Pin No.	Pin Name	I/O	Description
42	NC	-	Not connected.
43	$\overline{\text{SEG DP}}$	O	SEG DP control.
44	$\overline{\text{SEG A}}$	O	SEG A control.
45	$\overline{\text{SEG B}}$	O	SEG B control.
46	$\overline{\text{SEG C}}$	O	SEG C control.
47	$\overline{\text{SEG D}}$	O	SEG D control.
48	NC	-	Not connected.

VOLTAGE CHART

IC001, LA1828

PIN NO.	FM	AM
1	0.93	0
2	0	0
3	4.73	4.88
4	4.73	4.88
5	4.68	4.88
6	0	0
7	1.24	1.24
8	1.35	1.36
9	0	0
10	4.22	0
11	0.01	3.2
12	4.8	4.88
13	0.59	0.3
14	1.27	1.25
15	1.27	1.25
16	0	0
17	0	0
18	4.8	4.88
19	0.01	0
20	4.8	4.88
21	4.8	4.88
22	4.8	4.88
23	0	0
24	0.33	1.26

IC202, TA8227P

PIN NO.	ACTIVE	STATIC
1	12.31	11.5
2	6.57	6.1
3	12	1.5
4	0	0
5	0.56	0.56
6	0	0
7	0	0
8	0.56	0.56
9	6.65	6.41
10	12	1.42
11	6.46	6.2
12	13.1	12.5

IC401, LA9241ML

PIN NO.	ACTIVE	STATIC
1	2.67	2.53
2	2.65	2.53
3	2.67	2.53
4	2.67	2.56
5	2.67	2.53
6	2.66	2.55
7,8	2.67	2.55
9	2.65	2.54
10	2.66	2.52
11	2.67	2.55
12	2.7	2.54
13	2.67	2.55
14	2.7	2.54
15	2.72	2.54
16	2.69	2.54
17	2.67	2.55
18	2.69	2.55
19	2.73	2.54
20	2.69	2.54
21	0	2.54
22	2.67	0
23	2.67	2.53
24	2.65	2.54
25	2.69	2.56
26	2.75	2.56
27	2.75	2.5
28	2.68	2.55
29	2.75	2.55
30	2.45	2.33
31	2.45	2.34
32,33	0	0
34	5.22	5.01
35	0	5.01
36	1.4	0.04
37	0	0.01
38	0	5
39	0	0
40	0.25	0
41	2.45	1.61
42	2.54	2.45
43	2.54	2.41
44	2.63	2.53
45	0	0
46	2.64	2.54
47	2.65	2.55
48	0	0
49	0	0
50	2.54	2.44
51	4.77	4.71
52	4.86	4.71
53	0	0.07
54	5.11	0.03
55	0.16	0.14
56	5.2	5.01
57	2.64	2.54
58	2.64	2.56
59	2.59	0.98
60	2.57	0.99
61	2.3	2.24
62	3.86	4.35
63	0.19	0
64	5.18	5.02

IC402, LC78622NE

PIN NO.	ACTIVE	STATIC
1	0	0
2	0	0
3	1.8	0.01
4	0	0
5	2.1	1.85
6	5.6	4.98
7	0.4	0.07
8	0	0
9	2.8	2.52
10	2.7	2.41
11	0	0
12	0.3	0
13	0	0
14	0	5
15	0	0.01
16	1.5	0.04
17	0	5.01
18	5.6	5.01
19,20	0	0
21	2.7	2.48
22	5.6	0
23	5.6	5.02
24,25	0	0
26	0	5
27	5.6	5
28,29	0	0
30	0	4.95
31	2.8	2.48
32~34	0	0
35	0	5.02
36	5.3	4.77
37	2.15	1.94
38,39	0	5
40	2.15	1.95
41	5.3	4.77
42	0	5
43	5.5	5.02
44	2.3	2.08
45	2.3	2.06
46	2.3	0
47	0.1	0.08
48	0	2.27
49	0.1	0
50	2.77	2.5
51	0	0
52	2.77	2.5
53	0.9	0
54	0	0.07
55	0	0
56	5.16	4.71
57	5	4.71
58	5.5	5
59	0	0
60	2.25	2.02
61	2.66	2.41
62~64	0	0

IC404, MM1469XH

PIN NO.	ACTIVE	STATIC
1	4.2	3.61
2	4.2	3.62
3,4	2.95	2.54
5	8.2	7.24
6,7	5.8	5.02
8	0	0
9	2.95	2.55
10	3	2.55
11	4.27	3.61
12	4.01	3.63
13	0	0
14	8.4	7.39
15	1.45	0.78
16	1.45	0.8
17	4.1	3.63
18	4.1	3.62
19	2.9	2.54
20	2.9	2.55
21,22	8.9	7.96
23,24	2.9	2.55
25	2.9	2.54
26	4.5	3.61
27	3.71	3.62
28	0	0

IC801, NJM14558LD

PIN NO.	TAPE	REC
1	3.37	3.38
2	3.37	3.39
3	3.34	3.35
4	0	0
5	3.34	3.35
6	3.37	3.39
7	3.37	3.38
8	6.83	6.82

IC203, M62495AFP

PIN NO.	CD	TAPE	TUNER
1	2.54	2.55	2.56
2	2.55	2.55	2.56
3	2.55	2.55	2.56
4	0.7	0.8	2.56
5	2.54	2.55	2.57
6	2.56	2.56	2.57
7	2.55	2.55	2.57
8	2.55	2.56	2.57
9	2.55	2.55	2.56
10	2.55	2.55	2.57
11	2.56	2.56	2.57
12	5.08	5.09	5.11
13	2.82	2.83	2.83
14	0	0	0
15	2.55	2.55	2.56
16	2.55	2.55	2.56
17	2.55	2.56	2.57
18	2.55	2.55	2.56
19	2.57	2.57	2.58
20	2.54	2.55	2.57
21	0.7	0.58	0.69
22	2.54	2.06	2.56
23	2.55	2.56	2.56
24	2.54	2.55	2.56

IC601, LC865516A-5T66

PIN NO.	TAPE	TUNER	CD
1	0.12	0.12	0.1
2	0.12	0.11	0.09
3	0.12	0.11	8.53
4	0.07	0.03	0.26
5	4.65	4.7	4.61
6	1.59	1.64	1.58
7	0	0	0
8	2.52	2.58	2.49
9	0	0.02	0
10	2.11	4.4	2.09
11	2.25	4.9	2.23
12	4.8	4.9	4.76
13	4.99	5.1	5.06
14	4.99	5.1	5.06
15	0.9	5.1	5.07
16	0	0	4.84
17	0.03	0.02	0
18	1.2	0	0
19	4.8	4.9	4.76
20	0.03	0.03	0.01
21	5.23	5.34	5.2
22	0	0	0.01
23	0.04	0.05	0.01
24	0	0	0
25	4.77	4.86	4.74
26	0.06	0.05	4.75
27	0.06	4.9	0.04
28	4.76	4.87	4.71
29	0	0.06	0
30	0.06	0.06	0.04
31	0.06	0.06	0.04
32	0.26	0.16	0.24
33	0.07	0.06	0.04
34	0.05	0.05	4.75
35	0.08	0.09	1.94
36	0.05	0.05	4.75
37	0.05	0.05	0.03
38	0.06	0.06	0.04
39	0.05	0.05	4.72
40	0.05	4.86	0.03
41	4.79	0.05	0.03
42	0.34	2.82	2.39
43	9.54	9.44	6.11
44	0.12	0.12	0.1
45	9.55	9.11	0.11
46	0.12	0.12	0.1
47	0.12	0.12	0.1
48	2.3	2.3	2.2

Q001

PIN	FM	AM
E	2.22	2.21
C	4.07	4.06
B	2.95	2.95

Q002

PIN	FM	AM
E	4.82	4.9
C	8	8
B	5.52	5.58

Q003

PIN	FM	AM
E	5.53	5.59
C	5.52	5.59
B	4.85	4.9

Q004

PIN	FM	AM
E	0	0
C	4.06	4.12
B	2.98	3.03

Q243

PIN	ACTIVE	STATIC
E	0	0
C	0	0
B	0.12	0.64

Q244

PIN	ACTIVE	STATIC
E	0	0
C	0	0
B	0.12	0.64

Q301

PIN	ACTIVE	STATIC
E	12.2	12.66
C	11.4	12
B	11.5	11.99

Q302

PIN	ACTIVE	STATIC
E	11.5	11.99
C	11.4	12
B	10.9	11.32

Q303

PIN	ACTIVE	STATIC
E	0	0
C	0	0
B	4.57	4.57

Q304

PIN	ACTIVE	STATIC
E	11.38	11.97
C	7.94	7.98
B	10.75	11.34

Q305

PIN	ACTIVE	STATIC
E	7.23	7.26
C	10.56	11.23
B	7.85	7.87

Q306

PIN	ACTIVE	STATIC
E	5.08	5.09
C	7.94	7.98
B	10.75	5.81

Q310

PIN	ACTIVE	STATIC
E	5.55	5.56
C	10.45	10.83
B	6.25	6.26

Q321

PIN	ACTIVE	STATIC
E	0	0
C	0.01	0.02
B	0.6	0.7

Q401

PIN	ACTIVE	STATIC
E	4.46	4.99
C	2.11	1.56
B	3.76	4.35

Q402

PIN	ACTIVE	STATIC
E	7.87	7.97
C	5.3	5.15
B	7.17	7.28

Q403

PIN	ACTIVE	STATIC
E	2.56	2.56
C	2.56	2.56
B	0	0

Q406

PIN	ACTIVE	STATIC
E	0	0
C	4.6	4.6
B	0	0

Q407

PIN	ACTIVE	STATIC
E	4.6	4.58
C	2.57	2.55
B	2.56	2.55

Q408

PIN	ACTIVE	STATIC
E	4.6	4.58
C	2.57	0.55
B	2.56	2.55

Q491

PIN	ACTIVE	STATIC
E	7.91	7.98
C	7.88	7.97
B	7.15	7.23

Q492

PIN	ACTIVE	STATIC
E	0	0
C	0.14	0.14
B	4.41	4.41

Q801

PIN	TAPE	REC
E	0	1.64
C	0	5.9
B	0	2.31

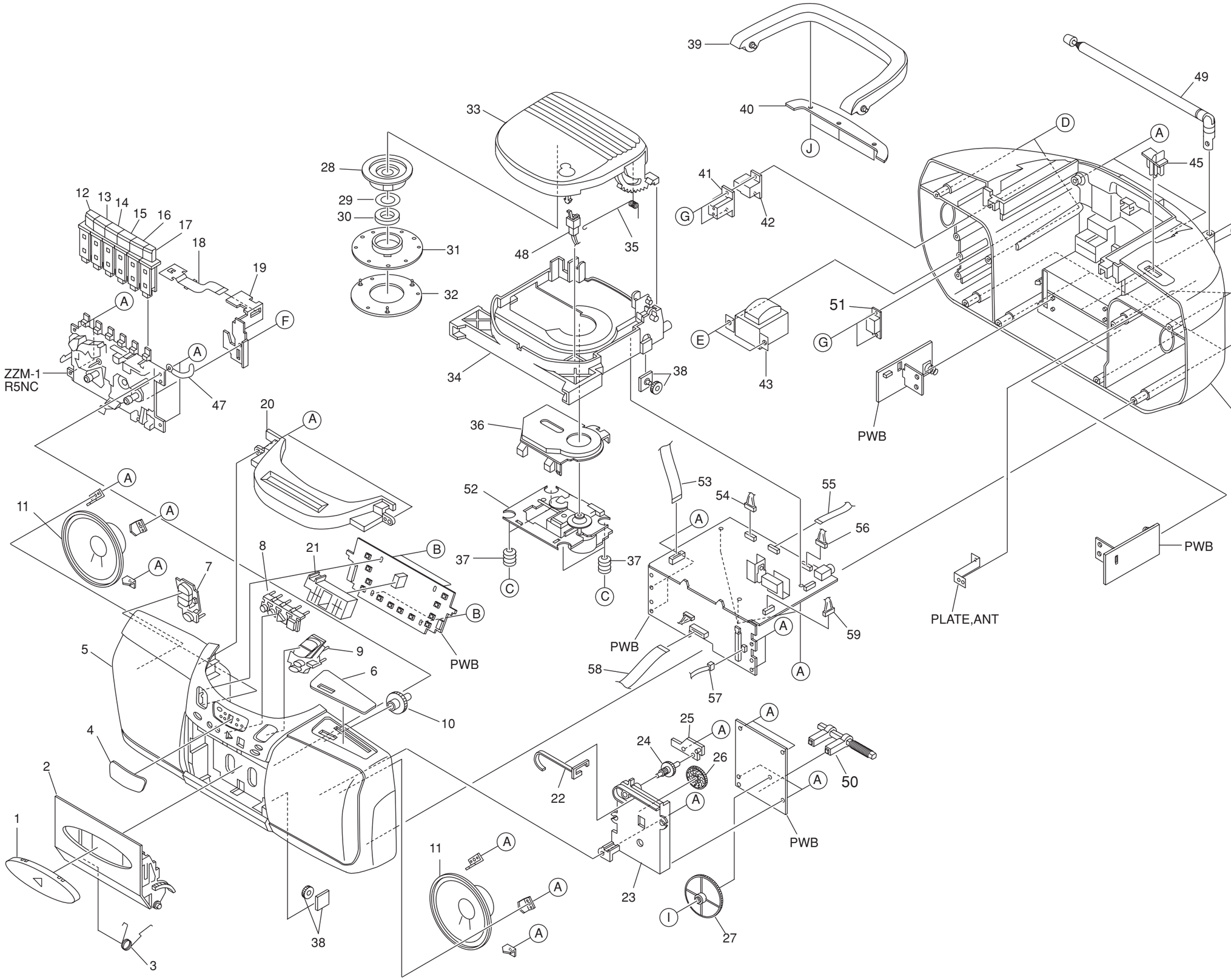
Q810

PIN	TAPE	REC
E	3.36	3.38
C	0.05	13.85
B	0.13	0.13

Q841

PIN	TAPE	REC
E	0	0
C	0.72	0.01
B	0	5.73

MECHANICAL EXPLODED VIEW 1 / 1



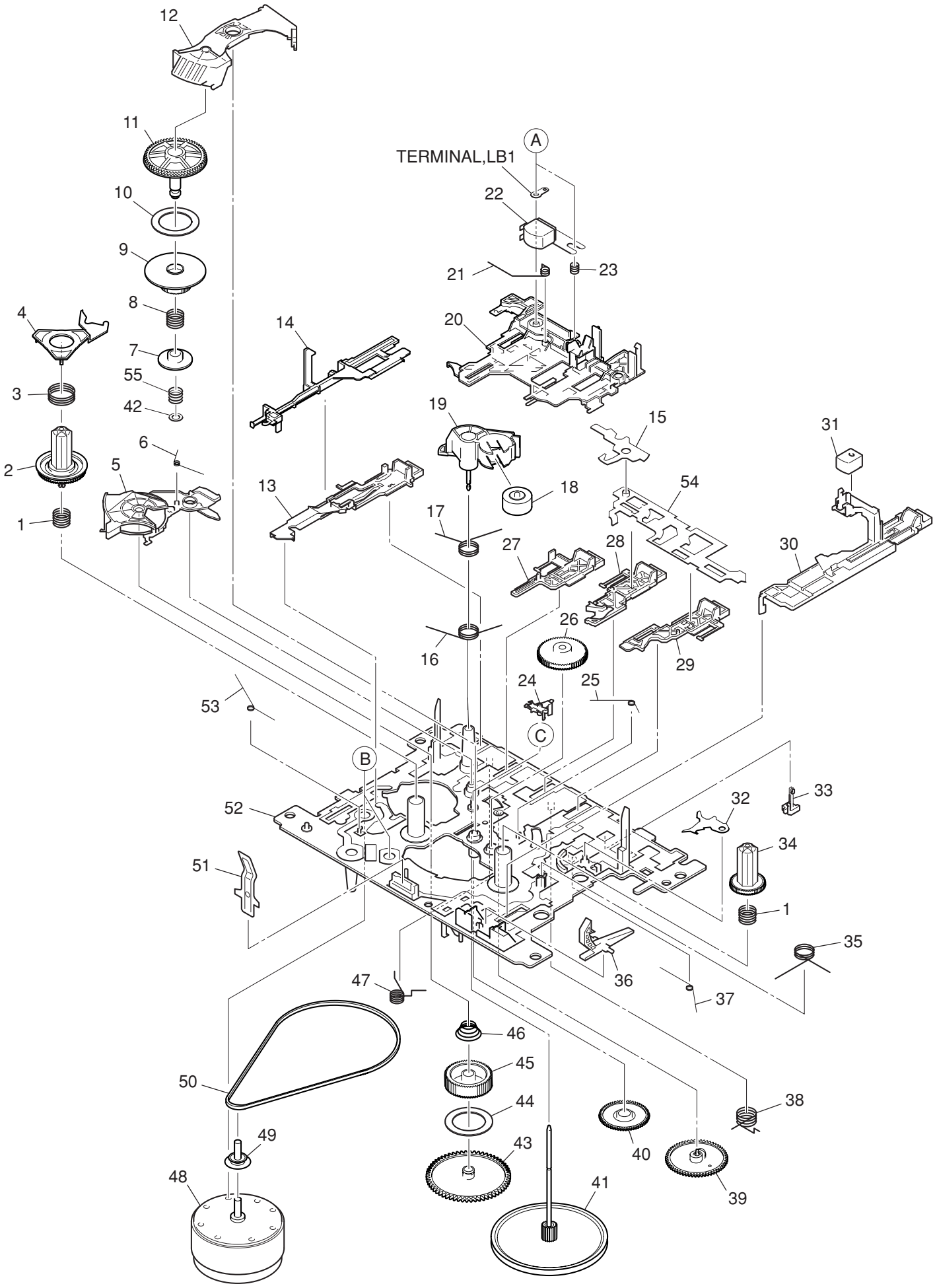
MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-CDA-009-010		WINDOW,CASS<[W],[S]>
1	8B-CDA-086-010		WINDOW,CASS (D)<[D]>
1	8B-CDA-093-010		WINDOW,CASS (G)<[G]>
1	8B-CDA-154-010		WINDOW,CASS (P)<[P]>
1	8B-CDA-073-010		WINDOW,CASS (L)<[L]>
2	8B-CDA-132-010		LID,CASS U (W)<[W]>
2	8B-CDA-003-010		LID,CASS<EXCEPT [W]>
3	8B-CDA-208-010		SPR-T,CASS
4	8B-CDA-089-010		WINDOW,DISP LH<[W],[S]>
4	8B-CDA-127-010		WINDOW,DISP LH (D)<[D]>
4	8B-CDA-125-010		WINDOW,DISP LH (G)<[G]>
4	8B-CDA-126-010		WINDOW,DISP LH (P)<[P]>
4	8B-CDA-124-010		WINDOW,DISP LH (L)<[L]>
5	8B-CDA-058-010		CABI ASSY,FRONT LH (W)<[W]>
5	8B-CDA-161-010		CABI ASSY,FRONT LH<[S]>
5	8B-CDA-056-010		CABI ASSY,FRONT LH (D)<[D]>
5	8B-CDA-066-010		CABI ASSY,FRONT LH (G)<[G]>
5	8B-CDA-067-010		CABI ASSY,FRONT LH (P)<[P]>
5	8B-CDA-059-010		CABI ASSY,FRONT LH (L)<[L]>
6	8B-CDA-087-010		WINDOW,TU LH<EXCEPT [L]>
6	8B-CDA-088-010		WINDOW,TU LH (L)<[L]>
7	8B-CDA-017-010		KEY,FUNC C
8	8B-CDA-014-010		KEY,CD
9	8B-CDA-016-010		KEY,FUNC B
10	8B-CDA-011-010		KNOB,RTRY TU
11	8B-CDA-615-010		SPKR,10 7OHM
12	8B-CDA-019-010		KEY,PAUSE<[W],[S]>
12	8B-CDA-149-010		KEY,PAUSE (D)<[D]>
12	8B-CDA-095-010		KEY,PAUSE (G)<[G]>
12	8B-CDA-160-010		KEY,PAUSE (P)<[P]>
12	8B-CDA-076-010		KEY,PAUSE (L)<[L]>
13	8B-CDA-020-010		KEY,STOP<[W],[S]>
13	8B-CDA-148-010		KEY,STOP (D)<[D]>
13	8B-CDA-096-010		KEY,STOP (G)<[G]>
13	8B-CDA-159-010		KEY,STOP (P)<[P]>
13	8B-CDA-077-010		KEY,STOP (L)<[L]>
14	8B-CDA-021-010		KEY,FF<[W],[S]>
14	8B-CDA-147-010		KEY,FF (D)<[D]>
14	8B-CDA-097-010		KEY,FF (G)<[G]>
14	8B-CDA-158-010		KEY,FF (P)<[P]>
14	8B-CDA-078-010		KEY,FF (L)<[L]>
15	8B-CDA-022-010		KEY,REW<[W],[S]>
15	8B-CDA-146-010		KEY,REW (D)<[D]>
15	8B-CDA-098-010		KEY,REW (G)<[G]>
15	8B-CDA-157-010		KEY,REW (P)<[P]>
15	8B-CDA-079-010		KEY,REW (L)<[L]>
16	8B-CDA-023-010		KEY,PLAY<[W],[S]>
16	8B-CDA-145-010		KEY,PLAY (D)<[D]>
16	8B-CDA-099-010		KEY,PLAY (G)<[G]>
16	8B-CDA-156-010		KEY,PLAY (P)<[P]>
16	8B-CDA-080-010		KEY,PLAY (L)<[L]>
17	8B-CDA-024-010		KEY,REC<[W],[S]>
17	8B-CDA-144-010		KEY,REC (D)<[D]>
17	8B-CDA-100-010		KEY,REC (G)<[G]>
17	8B-CDA-155-010		KEY,REC (P)<[P]>
17	8B-CDA-081-010		KEY,REC (L)<[L]>
18	8A-CDA-221-010		SPR-P,REC
19	8A-CDA-220-010		PLATE,REC
20	8B-CDA-008-010		PANEL,TOP<[W],[S]>
20	8B-CDA-085-010		PANEL,TOP (D)<[D]>
20	8B-CDA-106-010		PANEL,TOP G<[G]>
20	8B-CDA-133-010		PANEL,TOP (P)<[P]>
20	8B-CDA-136-010		PANEL,TOP U (L)<[L]>
21	8B-CDA-201-010		HLDR,LED
22	8B-CDA-040-010		POINTER,TU
23	8B-CDA-202-010		HLDR,TU
24	8A-CDA-216-110		GEAR,TU B
25	8A-CDA-203-110		GUIDE,GEAR
26	8A-CDA-202-110		GEAR,RELAY
27	8A-CDA-215-010		DRUM,TU
28	86-CT9-217-110		HLDR,CHUCK A(S)
29	86-CT9-222-010		PLATE,MAGNET
30	87-036-368-010		MAGNET
31	8Z-CT6-213-110		BASE,CHUCK
32	8Z-CT6-214-110		RING,CHUCK
33	8B-CDA-006-010		LID,CD<[W],[S]>
33	8B-CDA-084-010		LID,CD (D)<[D]>
33	8B-CDA-104-010		LID,CD G<[G]>
33	8B-CDA-129-010		LID,CD (P)<[P]>
33	8B-CDA-135-010		LID,CD U (L)<[L]>
34	8B-CDA-063-010		CHAS,CD (W)<[W]>
34	8B-CDA-005-010		CHAS,CD<EXCEPT [W]>
35	8B-CDA-206-010		SPR-T,CD
36	8Z-CDB-169-010		PANEL,CD SANYO
37	88-CH6-220-010		CUSHION,CD A
38	87-063-165-010		OIL-DMPR 150
39	8B-CHA-021-010		HANDL,ARM W<[W]>
39	8B-CDA-007-010		HANDL,ARM<EXCEPT [W]>
40	8B-CHA-022-010		LID,HANDL W<[W]>
40	8B-CDA-010-010		LID,HANDL<EXCEPT [W]>
⚠ 41	8Z-CD5-634-010		COVER,AC SOCKET
⚠ 42	87-A60-178-010		JACK,AC E W/SW
⚠ 43	8A-CDA-613-010		PT,H 2.5W
44	8B-CDA-069-010		CABI,REAR LH (W)<[W]>
44	8B-CDA-030-010		CABI,REAR LH<EXCEPT [W]>
45	8B-CDA-018-010		KNOB,SL BAND
46	8B-CHA-020-010		LID,BATT W<[W]>
46	8B-CDA-004-010		LID,BATT<EXCEPT [W]>
47	87-064-185-010		HLDR,WIRE
48	87-036-389-010		SW,PUSH LOCK
49	87-A91-857-010		ANT,ROD 5SEC709
50	88-CD6-661-010		HLDR,BAR ANT.
⚠ 51	87-A91-369-010		SW,AC SL 2 2 2 SDKGA41700
52	M8-ZZK-E90-070		DA11T3C
53	8B-CDA-621-010		FF-CABLE,16P CD-RF
54	8B-CDA-626-010		CONN ASSY,2P DOOR
55	8B-CDA-622-010		FF-CABLE,8P CD-FR
56	8B-CDA-633-010		CONN ASSY,4P SP
57	8B-CDA-630-010		CONN ASSY,4P RPH
58	8B-CDA-620-010		FF-CABLE,16P FR-MAIN
59	8B-CDA-631-010		CONN ASSY,4P TA-ME
A	87-751-096-410		VT2+3-10 GLD
B	87-721-096-410		QT2+3-10 GLD
C	8A-CK4-223-010		S-SCREW,CD
D	87-751-104-410		VT2+3-30
E	87-254-097-410		U+3-12 CR
F	8A-CDA-222-010		S-SCREW,CASS+2.6-4
G	87-751-076-410		SCREW 2.6-12
H	87-B10-183-010		VT2+3-20 W/O SOLT
I	87-261-073-410		V+2.6-6
J	87-721-074-410		QT2+2.6-8 W/O SLOT

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray

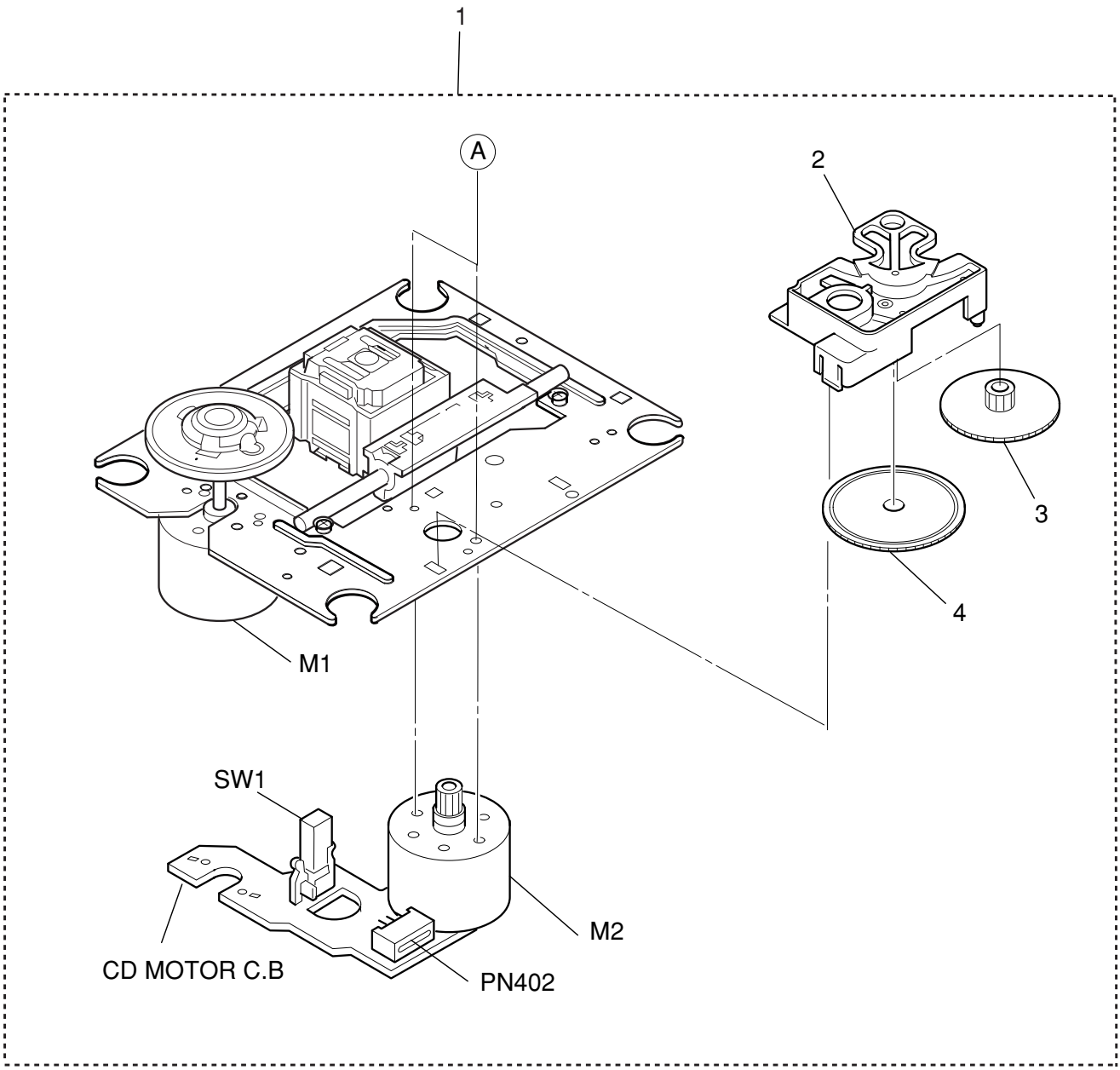
TAPE MECHANISM EXPLODED VIEW 1 / 1



TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-310		SPR-C,REEL R
2	8Z-ZM1-225-110		GEAR,REEL R
3	8Z-ZM1-253-210		SPR-C,AUTO SENSOR
4	8Z-ZM1-217-110		LEVER,AUTO SENSOR
5	8Z-ZM1-212-110		LEVER,T-UP
6	8Z-ZM1-245-310		SPR-T,AUTO
7	8Z-ZM1-236-010		CLR,SLIP FF/REW
8	8Z-ZM1-252-110		SPR-C,FF/REW
9	8Z-ZM1-230-010		GEAR,SLIP FF/REW A
10	8Z-ZM1-269-010		FELT,FF/REW 2
11	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
12	8Z-ZM1-237-110		LEVER,FF/REW 2
13	8Z-ZM1-283-010		LEVER,PAUSE 2
14	8Z-ZM1-222-010		LEVER,E-LOCK M
15	8Z-ZM1-219-010		LEVER,E-OPEN
16	8Z-ZM1-244-110		SPR-T,T-UP
17	8Z-ZM1-247-310		SPR-T,PINCH
18	8Z-ZM1-261-110		ROLLER ASSY,PINCH
19	8Z-ZM1-221-210		LEVER,PINCH
20	8Z-ZM1-205-310		LEVER,PLAY
21	8Z-ZM1-248-210		SPR-T,BRG
22	87-A92-207-010		HEAD,AP-4211T4
23	84-ZM2-227-310		SPR-C,AZIMUTH
24	8Z-ZM1-216-110		LEVER,AUTO
25	8Z-ZM1-246-110		SPR-T,AUTO 2
26	8Z-ZM1-233-110		GEAR,IDL REW
27	8Z-ZM1-208-010		LEVER,STOP
28	8Z-ZM1-207-010		LEVER,FF
29	8Z-ZM1-206-010		LEVER,REW
30	8Z-ZM1-211-210		LEVER,REC 2
31	87-A91-819-010		HEAD,EH 2NSS-2200
32	8Z-ZM1-215-010		LEVER,REC LOCK
33	87-A91-492-010		SW,LEAF MSW18560
34	8Z-ZM1-226-010		GEAR,REEL L
35	8Z-ZM1-241-210		SPR-T,PLAY
36	8Z-ZM1-220-110		LEVER,REC SENSOR
37	8Z-ZM1-249-210		SPR-T,FR
38	8Z-ZM1-242-310		SPR-T,FF/REW
39	8Z-ZM3-244-010		GEAR,CAM TD20
40	8Z-ZM1-232-010		GEAR,IDL FF/REW
41	82-ZM1-290-010		FLY-WHL ASSY,ZZM1
42	8Z-ZM1-275-010		W-L,1.47-4-0.25
43	8Z-ZM1-228-010		GEAR,SLIP T-UP B
44	8Z-ZM1-265-010		FELT,T-UP
45	8Z-ZM1-227-010		GEAR,SLIP T-UP A
46	8Z-ZM1-251-210		SPR-C,T-UP SLIP
47	8Z-ZM1-243-310		SPR-T,STOP/PAUSE
48	87-A91-825-010		MOT,M09Y/Z
49	8Z-ZM1-271-010		PULLEY,MOT ZZM-1
50	8Z-ZM1-264-010		BELT,MAIN S
51	8Z-ZM1-260-010		SPR-P,CASETTE
52	8Z-ZM1-201-910		CHAS ASSY,ZZM-1
53	8Z-ZM1-255-310		SPR-T,E-LOCK
54	8Z-ZM1-214-210		LEVER,LOCK
55	8Z-ZM1-257-110		SPR-C,F/R
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM1-270-110		V+2.6 ZZM-1
C	87-B10-301-010		W-L,1.63-3.2-0.5 SLIT

CD MECHANISM EXPLODED VIEW 1 / 1



CD MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	M8-ZZK-E90-070		DA11T3C
2	S2-121-A28-400		COVER GEAR
3	S2-511-A21-000		GEAR MIDDLE
4	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111

9301978 2000041 0251431 Printed in Singapore